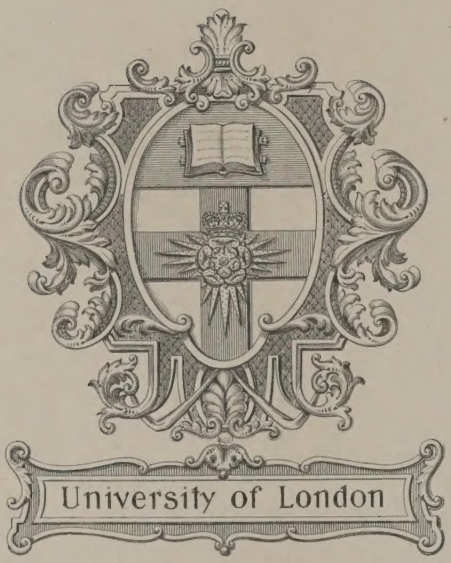
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REPORTS

FROM

COMMITTEES:

TEN VOLUMES.

—(6.)—

ELECTRIC TELEGRAPHS BILL;
LEE RIVER CONSERVANCY BILL;
PUBLIC SCHOOLS BILL.

Session

19 *November* 1867 —— 31 *July* 1868.

VOL. XI.

1867-8.

REPORTS

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Session

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TEN VOLUMES:—CONTENTS OF THE

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SPECIAL

REPORT

FROM THE

SELECT COMMITTEE

ON THE

ELECTRIC TELEGRAPHS BILL;

TOGETHER WITH THE

MINUTES OF EVIDENCE

TAKEN BEFORE THEM.

Ordered, by The House of Commons, *to be Printed,*
16 *July* 1868.

435.

Thursday, 18*th June* 1868.

Electric Telegraphs Bill read a second time, and committed to a Select Committee.

Tuesday, 23*rd June* 1868.

Committee nominated—

Mr. Chancellor of the Exchequer.	Mr. Leeman.
Mr. Goschen.	Mr. Charles Turner.
Sir Frederick Heygate.	Mr. Norwood.

And Five Members to be added by the Committee of Selection.

Ordered, THAT the Committee have Power to send for Persons, Papers, and Records.

Ordered, THAT Five be the Quorum of the Committee.

Ordered, THAT it be an Instruction to the Select Committee on the Electric Telegraphs Bill to inquire,—

1. Whether it is desirable that the transmission of messages for the public should become a legal monopoly in the Post Office:

2. Whether it should be left to the discretion of the Postmaster General to make special agreements for the transmission of messages or news at reduced rates:

3. What securities should be taken for insuring the secrecy of messages transmitted through the Post Office:

4. What arrangements should be made for the working of submarine cables to foreign countries: and,

5. To hear such Telegraph and Railway Companies and Proprietors as shall by petition, on or before the 26th instant, have prayed to be heard by themselves, their counsel or agents against such of the matters referred to the Committee as affect their particular interests.

Thursday, 25*th June* 1868.

The following Members are added by the Committee of Selection—

Mr. Graham.	Mr. Potter (Carlisle).
Major Cornwall Legh.	Mr. Sandford.
Colonel Loyd Lindsay.	

Wednesday, 1*st July* 1868.

Ordered, THAT Major Cornwall Legh be discharged from further attendance on the Select Committee, and that Colonel John W. Fane be added thereto.

Thursday, 16*th July* 1868.

Ordered, THAT the Committee have leave to make a Special Report; and that they have Power to Report the Minutes of Evidence taken before them to The House.

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SPECIAL REPORT.

THE SELECT COMMITTEE on the ELECTRIC TELEGRAPHS BILL have agreed to the following SPECIAL REPORT:—

YOUR COMMITTEE have considered the several matters which they were specially instructed to inquire into, and are of opinion—

1. That it is not desirable that the transmission of messages for the public should become a legal monopoly in the Post Office.

2. That it should be left to the discretion of the Postmaster General, with the consent of the Treasury, to make special agreements for the transmission of certain classes of messages at reduced rates, but that any such special agreements should be laid upon the Table of the House of Commons as soon as conveniently may be.

3. That security should be taken for ensuring the secrecy of messages transmitted through the Post Office by making the violation of such secrecy punishable as a misdemeanour.

4. That the special circumstances at present attending the working of these submarine cables which the Postmaster General may acquire, make it desirable that provision should be made for the working of them by leasing the same, in the first instance, to a company or companies; copies of any such lease to be laid before Parliament; but it may ultimately be found expedient that the Post Office should itself work such cables.

REPORT.

THE SELECT COMMITTEE on the ELECTRIC TELEGRAPHS BILL have considered the said Bill, and taken Evidence thereon, which they have agreed to Report to the House; and have gone through the Bill, and made Amendments thereunto.

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MINUTES OF EVIDENCE.

Wednesday, 1st July 1868.

MEMBERS PRESENT:

Mr. Goschen.	Colonel Loyd Lindsay.
Mr. Graham.	Mr. Norwood.
Sir Frederick Heygate.	Mr. Potter (Carlisle).
Mr. Leeman.	Mr. Charles Turner.

THE CHANCELLOR OF THE EXCHEQUER IN THE CHAIR.

Frank Ives Scudamore, Esq., called in; Examined by Mr. *Sargood*.

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1. You are one of the Assistant Secretaries of the Post Office?—I am.

2. Have you been occupied in that establishment some 28 years, or thereabouts?—I entered in 1840.

3. Do you remember, in the year 1861, a memorandum which was prepared by Mr. Ricardo, who was the chairman of the Electric and International Telegraph Company, coming under your notice?—I do; I did not know at that time that it was a memorandum prepared by Mr. Ricardo, but I have since been informed by Mr. Burchell, who assisted him in preparing it, that it was; and I have also been informed by his private secretary that it was actually drawn up at the time he was the chairman of the company, which was some three years antecedent to 1861.

4. I think that that memorandum is in print, is it not, at pages 48 to 51 of the Parliamentary Paper, No. 80, published this year?—It is in the Blue Book before the Committee.

5. It is a "Memorandum in support of the expediency of the Telegraphic communication of the Kingdom being placed in the hands of Her Majesty's Government;" that is the document which you refer to?—Yes, that is it.

6. We need not read it, but you will put it in as being contained in this book?—Yes.

7. Was that memorandum forwarded for the perusal of Mr. Gladstone at that time?—It was sent to Mr. Gladstone by Mr. Burchell, of No. 5, Broad Sanctuary.

8. I believe that it carried out a principle which had been previously enunciated by Mr. Allan, who had also drawn up something upon the subject?—It did, and it also broached a proposition which had been under the notice of Lord Stanley of Alderley when he was at the Board of Trade at an earlier period.

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9. Was Mr. Allan in any way connected with the Post Office?—Not at all.

10. What was he?—He was an electrician with several patents for telegraph instruments, and I think that he was the founder of the United Kingdom Telegraph Company.

11. I think that at this period, in 1861, you were very much occupied, were you not, with the savings bank institutions that were then inaugurated?—I was so much occupied that I laid this paper on one side, and hardly gave it any attention at all, I am sorry to say now.

12. However, in 1865, did the Edinburgh Chamber of Commerce revive the subject by some action?—In the autumn of that year they appointed a committee to inquire into the subject, and the chairman of that committee, Mr. George Harrison, who is now the President of the Edinburgh Chamber of Commerce, prepared a report, which is also printed in the Blue Book to which you have referred.

13. Do you remember at what page it is?—It is at pages 51 to 54 of that Blue Book.

14. I believe some other Chambers of Commerce followed in that direction, did they not?—Almost all the Chambers of Commerce in the kingdom; but the Associated Chamber of Commerce notably presented a petition, which is printed at pages 57 and 58 of the same book.

15. The Chambers of Commerce having taken up the subject, I believe my Lord Stanley of Alderley then called your attention to it by an official letter, did he not?—He did.

16. Have you that letter here, or a copy of it?—I have an extract from it here.

17. What was the date of it, do you remember?—It was dated in September 1865; I cannot tell you the precise date from memory.

18. Will you give us the extract which you have from that letter?—He desired me to inquire and report whether, in my opinion, the Electric Telegraph service might be beneficially worked by the Post Office, and whether it would then possess any advantage over a system worked by private companies, and whether it would entail a very large expenditure on the department beyond the purchase of existing rights.

19. Is that letter in the Blue Book?—No, it is not in the Blue Book.

20. Did you take up that inquiry, and continue your investigations for a considerable period?—I did take it up after some little time, and after Lord Stanley had frequently pressed me to do so.

21. And did you then make yourself master of what the views, as taken by the various Chambers of Commerce, were at that period?—I did.

22. I think you have taken the trouble to condense them into a summary of five or six headings, and you may give them to us in your own words again?—The Chambers of Commerce, and the supporters of the proposition generally, concurred in thinking, amongst other things, that the existing charges for the transmission of messages are too high; that many places and districts are unprovided with facilities for telegraphic communication; that, in the great majority of places which are provided with facilities for telegraphic communication, the telegraphic office is inconveniently remote from the centre of business and population, and open for too small a portion of the day. That in the countries in which the telegraphs are under the control of the State, lower rates, and a more widely spread telegraphic system prevails. That, in such countries, correspondence by telegraph has become more general, and, as it were, more popular than in this country. And, lastly, that in the United Kingdom like results would follow the adoption of like means, and that from the annexation of the English telegraphs to the English Post Office, there would accrue great advantage to the public and ultimately a large revenue to the State. They broached some other propositions which I have not included in that summary, because my inquiries did not enable me altogether to substantiate them.

23. I may venture to ask you, probably, on this communication from Lord Stanley, did you take up this question with a view of inquiring into it dispassionately, or did you take it up as a partisan, and advocate the principle of giving this telegraph business to the Post Office?—So far from taking it up as a partisan, I took it up rather reluctantly, and not, I may say, until I had really been whipped into it by Lord Stanley.

24. Then

24. Then your original views were not so much in sympathy with the Bill, as they are this year?—I think it was partly idleness; I had had one or two heavy jobs, and I foresaw that this would be a very heavy job indeed, and I presume that I was quite right in what has taken place to-day in that belief; I was very reluctant, indeed, to enter upon it.

25. Having entered upon it, do you agree, as the results of your experience and inquiry, in the views which you say the Chambers of Commerce have expressed?—I do.

26. I am afraid I must carry you through the various points, and have your experience upon them. First we will take the question that the telegraph does not appear to be in such general use in this country as it is upon the Continent; is that a proposition which you have proved in the affirmative?—I think that I have proved it in the affirmative. In my first reports I endeavoured to prove it, by showing that telegrams were in a lower proportion to letters in the United Kingdom than in the states on the Continent. I assumed that the desire of the public for correspondence might be inferred from the use that they make of the post, and that consequently when they used the telegraph less in proportion to the post, there must be some circumstances which were calculated to make the telegraph less popular here than in those countries where the telegrams were in a higher proportion to the post; but the calculations which I entered into for that purpose were rather complicated, and would only weary the Committee, and therefore I would rather rest this part of the case on the statement of the Electric and International Telegraph Company made at the time they were opposing us, which I am happy to say they do no longer.

27. What were their views at that time expressed in their own words?—Their view of it was the view which was adopted in the House of Commons to some extent, and their view was, that in this country "the class who use the electric telegraph most freely are stockbrokers, mining agents, ship brokers, colonial brokers, racing and betting men, fruit merchants, and others engaged in business of a speculative character, or who deal in articles of a perishable nature."

28. Mr. *Hope Scott.*] May I ask is that in their petition?—No, it is not; it is in the pamphlet published as the case of the Electric and International Telegraph Company at page 62. They go on to say "even generally merchants use the telegraph comparatively little, compared with those engaged in the more speculative branches of commerce."

29. Mr. *Sargood.*] You say that that is a paragraph from a pamphlet which they have published and circulated; let me ask you this, in order to make that comparison between this and continental countries, did you put yourself in communication with the post offices of the various continental powers?—I wrote to the post offices of the continental powers, where they have the control of the telegraphs, and I wrote to the telegraphic administrations in states where the telegraphic administration and the post office are separate.

30. Did you do the Electric and International Telegraph Company the justice of sending the pamphlet which circulated their views upon the subject?—I did, and I called attention to that particular statement, and asked whether a like result had been observed in their experience of the working of the telegraph in foreign states.

31. You may just give us the heads of observation of the various countries with whom you communicated?—I communicated with Belgium, Switzerland, Prussia, Denmark, France, and Austria, and I have received replies from all but Austria; why we have not received their reply, I am unable to say.

32. Those replies I dare say are at the service of either the Committee or the opponents, if they should wish to have them?—I had hoped to have put them in to-day, but only a portion of them have come from the printer, but they will be ready to-morrow, I hope.

33. As they are absent for the moment, you may give us briefly what the result was; take Denmark for instance?—The Danish Administration stated that the telegraph in Denmark was used by mercantile people in general, and for social and domestic purposes.

34. What did Prussia say?—The Prussian Administration stated that whilst in the early days of the telegraph, when the rates were high and the accommodation limited, its use was almost exclusively confined to bankers, stockbrokers, large commercial houses, and newspaper correspondents, each reduction of rate or extension

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extension of the system to small towns has considerably increased the number of those who regularly send and receive messages.

35. What says Switzerland?—The Swiss Administration stated that the use of the telegraph is far from being confined to certain classes, and that the messages which relate to private business and to family affairs, form as important a part of the whole number as the messages of the banking and other trading interests.

36. What did Belgium say?—The Belgian Administration states that nearly 59 per cent. of the number of messages in Belgium are on private business and family affairs, and the French Administration states that messages of this class form 41 per cent. of the whole number of French inland messages.

37. You having given this attention to the subject, will you just state your views as to what reasons are operating for this contract between the two countries as to the general use of the telegraph?—Perhaps if I give some other illustrations of my reason for thinking that the telegraph is less popular here than it is abroad, I shall at the same time really be showing why it is less popular here than abroad. In this country the growth of telegraphic correspondence has been gradual and tolerably uniform, as if it were merely the gradually increasing correspondence of the class that first began to use it. From 1862 to 1866 it has increased at a rate ranging pretty equally from 25 to 30 per cent. There have been none of those sudden and prodigious jumps in the growth of telegraphic correspondence here, that have been observable abroad after each reduction of rate or extension of system.

38. Have you made inquiry as to the reduction of rates in the continental countries, and the consequent increase of telegraphic communication?—I have.

39. Can you give us in figures the result of that inquiry?—In Belgium, in the year 1863, a reduction of 33 per cent. in rate produced an immediate increase of 80 per cent. in the number of messages, and in 1866 a reduction of 50 per cent. in rate produced an immediate increase of 85 per cent. in messages. In Prussia, in 1867, a reduction of 33 per cent. in rate was followed by an increase in the very first month after the change of 70 per cent. in the number of the messages; in France, in 1862, a reduction of 35 per cent. in rate was followed by an increase of 64 per cent. in messages; but the most remarkable illustration is furnished by the experience of Switzerland in the first three months of this year. In Switzerland they reduced the inland rate 50 per cent. upon the first of January this year; and in the first three months there was an increase of 90 per cent. in the number of inland messages on the corresponding three months in the previous year. What is chiefly noticeable in all those increases is that they take effect from the very moment of the change, thus showing that they bring into the use of telegraphic correspondence, probably, a large number of persons who have not made use of such means of correspondence before.

40. You draw the conclusion, probably, from that, that the decrease of charge was the main provocative of that increase of custom?—I should be almost ashamed to weary the Committee by attempting to prove anything so obvious as that.

41. It seems a necessary *sequitur*?—Yes.

42. Have the French Administration lowered their rates recently, do you know?—Within the last few weeks they have had a project before the French Chamber, which has become law, for the purpose of reducing their already low rates by 50 per cent; but at the time they brought this before the French Chamber they took a vote for a considerable sum of money for the purpose of increasing the telegraphic accommodation, well knowing that unless they increased the wires, and instruments, and other appliances for telegraphic correspondence, they would be unable to meet the immense increase of business which they expected to get.

43. You look upon that, then, as indicating their certainty of getting business, inducing circumspection in increasing the means of sending messages?—The French Government stated their views upon that subject at very great length, and in that direction to the French Chamber.

44. Do you draw the conclusion that the limited use of the telegraph in this country is to be mainly attributed to the fact of the charges being above an ordinary and reasonable rate?—Yes; I think that the rates prevailing in this country are partly the cause of the insufficient use that is made of telegraphs.

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45. Can you give us a short synopsis of what the current rates are in the United Kingdom; I think in the United Kingdom that for a message of 20 words, with an allowance, say 10 words for the address, or anything of that sort, there are some sixpenny rates in a few towns, are there not?—In London and some few towns there is apparently a sixpenny rate.

46. That is by no means a novel thing, is it?—No; it is limited to very few towns, and presently I shall show that it is delusive.

47. Then I think the rates go by the distance, do they not?—In Great Britain they do.

48. Can you give me the rates, say for 100 miles?—The 100 mile rate is 1 *s.*; over 100 miles and up to 200 miles, 1 *s.* 6 *d.*; beyond 200 miles in Great Britain, 2 *s.*; and for messages from Great Britain to Ireland, as a general rule (there are some exceptions), 4 *s.*

49. I believe you are proposing to have a uniform rate, 1 *s.* everywhere?—A maximum rate of 1 *s.*

50. Just as the postage is a uniform rate of 1 *d.*; upon that same principle?—Yes.

51. That is the maximum rate?—Yes; it may be reduced hereafter, including Ireland.

52. Is that for a message of 20 words?—Yes; 20 words, and the address unlimited.

53. In other words, a 20 words' message, excluding the address of the sender and sendee?—Undoubtedly.

54. Are you encouraged to do that by finding a uniform rate on the Continent?—In four continental states there is a uniform rate. In Denmark it is 9 *d.*; in the Netherlands 63 centimes; and in Belgium and Switzerland half a franc. In Prussia the rate varies with distance; for a distance not exceeding about 65 English miles (I cannot give the exact proportion), 6 *d.*; for a distance exceeding 65 English miles, and not exceeding 230 miles, 1 *s.*; and for distances exceeding 230 miles, 1 *s.* 6 *d.* In France, for a message from one to another part of the same department, the rate is 1 franc for 20 words, inclusive of the address; and for a message from any place in any department to any place in the other departments, without regard to distance, 2 francs; the reduction of those rates to half a franc and a franc respectively, at an early date, has been authorised by the French Chamber. I ought to say, in justice to the Telegraph Companies, that the charge for telegraphic messages on the Continent is in no case exclusive of the address; it is always inclusive, so that the English have the advantage over the Continent; in a message of a considerable number of words thay get that advantage for the first 10 words.

55. Those charges that you have given us, I think, are for transmission by the wires only, and do not include any question of porterage?—They include porterage within the special delivery, just as they do here within a limited area.

56. Have the continental telegraphs any advantage over the English, from the fact of their being more contiguous to the immediate population than they are in this country?—Yes, they have; the continental telegraphic administrations have continuously endeavoured to carry the wires into the centres of the population; in this country the telegraph system has grown up round the railway system, and is therefore of necessity not so close to the population as it is where the railway system has been less strictly regarded. In France there are in all upwards of 2,500 telegraph offices, of which 1,000 only are at the railway stations, and 1,500 in towns and small villages, and the French telegraphic administrations in the letter to which I have referred, ascribed the development of telegraphic correspondence in France partly to the successive reductions of rate, which have placed the telegraph within reach of all incomes, and partly to the progressive extension of the system, which after having united first of all the capitals of the departments, and next all the second rate towns, has extended its ramifications into the rural districts.

57. Can you tell me as to the relative position of the telegraph offices in Belgium as to railways and towns?—In Belgium the majority of telegraph offices are in towns and villages, and that they are established freely in places of little importance will be evidenced by the fact that, in 1866, there were upwards of 100 which did not dispatch, on an average, more than one telegram a day, and

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many of them dispatched much less than a telegram a day; in fact, some went down, I think, to one and two a month.

58. How stands Switzerland with regard to the position of its telegraph offices?—In Switzerland the telegraph wires are not only carried into the post offices, which are of necessity in the centres of the population, but they are in many cases carried into the large hotels, and a letter from the Swiss Administration, which I hope to put in to-morrow, will give some interesting particulars of the effect of that arrangement, which I am not in a position to state at present.

59. I am reminded that there is one up the Righi in Switzerland?—Yes, there is one at Vevey.

60. There are some much more formidable places than the Righi, as far as my memory goes; they go over the mountains in Switzerland in every possible direction, do they not?—Yes, they carry them into hotels for the convenience of tourists.

61. It is frequently the case that the telegraph is carried into large hotels?—Yes, undoubtedly; they have sent us the particulars of the agreement with the hotel keepers upon the subject.

62. Having given us the position of the telegraph offices in relation to railways and towns abroad, do you find a great contrast when you come to England in that respect?—In the United Kingdom the greater number of telegraph offices are, and have long been, at the railway stations; and the charge for transmission of messages to the offices at such stations is very frequently increased by the charges for porterage out of the free delivery; they do not carry the message so far by wire as the continental administrations do; they have to carry it further on human legs, and therefore the charge for porterage is somewhat higher.

63. Your idea, if these matters should fall into the hands of the Post Office, is to carry your wires so near to the people that those difficulties will be overcome?—We should endeavour to use legs as little as we possibly could.

64. You say as little as possible, but you do not mean to dispense with legs?—I am afraid, in the present state of the world, we must use legs to some extent.

65. The published rates for transmission, I think, in this country, are generally those for the conduct of the messages over the wires?—Yes, and within a limited free delivery.

66. Do they afford a fair approximation to the cost of the telegraphic message, bearing in mind that very much has to be supplemented by legs at an extra cost?—No, they do not. I can give some illustrations of that. For instance, there is apparently a sixpenny rate for transmission in some large towns, but the dispatching and receiving offices are so few in number in those large towns, and consequently so far distant from the bulk of the population, that a sixpenny rate can hardly be said to have a practical existence, whilst the time occupied in transmission is so great that the Post Office sometimes, and a private messenger almost always, can do the work more quickly.

67. That being a general observation, applicable to everybody and everything, perhaps you can give us some local illustrations; have you made any experiments with messages?—Yes, after the debate in the House of Commons on the second reading, when the question as to a sixpenny rate in towns was raised, I sent some experimental messages; in Birmingham, for instance, I sent 10 messages to different parts of the town and its immediate suburbs; in five cases the charge, including porterage, was 1 *s.* 6 *d.*; in two, 1 *s.*; and in three cases, in which 6 *d.* only was charged, the postmaster informs me that, to the best of his belief, the messages did not pass through the wires at all, but were sent at once by hand to their destination.

68. *Chairman.*] Those were messages which were sent from one part of Birmingham to another?—Yes, they were all sent from the Birmingham post office to other parts of Birmingham. In Liverpool I caused nine trial messages to be sent to places in the town and its vicinity. In four cases the total charge was 2 *s.* per message, and the average time occupied in the transmission was one hour and a quarter, and the average cost of the nine telegrams was 1 *s.* 4 *d.* In Leeds I am told that the 6 *d.* rate extends to two points only, Holbeck and Hunslet, lying within a mile; and in Edinburgh I believe it extends only to Leith.

69. Mr. *Sargood.*] Can you bring us a little nearer home, and give us a little London experience?—In London I sent messages from the City to Camberwell, Kensington, Norwood, Lee, and Hampstead. In no case was the total charge

less

less than 1 *s.* The telegram to Lee, near Blackheath, cost 2 *s.*; and the Post-office messenger, after depositing it at the telegraph office, went down to the place of destination by railway with a return ticket, which cost him 1 *s.*, and he arrived 20 minutes before the message did.

70. How did Kensington fare?—The message to Kensington cost 1 *s.*, and occupied fully two hours in transmission.

71. That is worse than the omnibus, I think?—Yes. The message to Hampstead cost 1 *s.* 3 *d.*, and occupied nearly three hours in transmission.

72. Mr. *Hope Scott.*] I suppose you abused the companies pretty freely for that?—We do not abuse them at all: I do not ascribe it to any fault of the companies.

73. Mr. *Sargood.*] It is rather a weakness than a vice?—But it is a weakness which does not lean to virtue's side.

74. I suppose between large towns messages may be transmitted rapidly?—There is no sort of ground for complaint with regard to the transmission of messages between large towns, none whatever; the work is rapidly done, there is a proper force of messengers, and messages are carried out promptly and properly.

75. You think that, notwithstanding the result of your experiments, the delay is not a necessary consequence of the existence of Telegraph Companies, and would not be a necessary consequence of the Post Office conducting the telegraphs?—Certainly not, it is really in consequence of the telegraph system having grown up mainly round the railway system. There are in the United Kingdom a great number of places which are distant four or five miles from the nearest telegraph station, which is mostly at the railway, and there are a great number of telegraph stations in the United Kingdom which are open for public business only at intervals throughout the day, and from which the messages received are sent out for delivery by chance messengers only. I may mention that only a fortnight ago I received a telegraphic message at my house which was brought by a fishmonger's boy who had been pressed into the service by the telegraph clerk. His fish would not keep, but my message would, and therefore he delivered the whole of his fish before he delivered the message. I do not say this in disparagement of the companies at all, not for one moment.

76. You are merely speaking as the experience of public life?—I beg to say, once for all, that I have never concurred with those who accused them of habitual inaccuracy in the transmission of messages. I think that they have done their work uncommonly well, and in the first instance at very great pecuniary risk, and in spite of very great difficulties indeed.

77. We may as well meet this at once; your object is not to throw blame on individuals?—No; it is on the system.

78. But merely to state the difficulties which exist?—Yes; and which will be removed.

79. Do you believe that a public department responsible to the country is less likely to fall into those errors than private speculators?—I believe that a public department will be forced not to fall into such errors, or if it does, will be forced out of them instantly.

80. Then we will relieve their minds at any rate by that acquittal; do you consider yourself that the amalgamation of railway work and telegraphic business is advantageous to the efficacious going on of the telegraphic work?—I do not quite understand the question; do you mean that I think it a misfortune that telegraphs have grown up around railways?

81. No, I did not quite mean that; I meant whether you considered that the occupation which people have at railways was detrimental or otherwise, to the acceleration of telegraphic business?—Undoubtedly where the working of a telegraph is left to a station master or to a clerk who has other avocations, he cannot give time immediately to the transmission of the message, and when a message can only be sent out when there is a railway porter disengaged for the purpose, a delay in the delivery must take place; there can be no question about it.

82. Do you consider also, that telegraphic means of communication is of importance to the whole community, and ought to be placed within their reach?—I do.

83. As much as facility of communicating by letter?—Quite as much; I think the more you can increase the means and facilities of communication, the more

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more you stimulate trade, economise capital, and facilitate every operation of commerce.

84. Having that view, do you think it a matter of such importance, that it is one which ought to be taken up by the Government in the interests of the country?—I do.

85. And that mere private speculators for the advantage of dividend are not so likely to consider the interests of the public as the Government office would?—I think that they are bound to consider the interests of their shareholders before they consider the interests of the public.

86. The question of capital and dividend, would not arise if those matters were under the management of a public office?—No; the Post Office would be bound in the interest of the nation to make its system self-supporting undoubtedly, and in doing that they could not avoid making a profit; but profit is not the first object in view.

87. Do the various Chambers of Commerce agree with you in the supposition that the telegraphic communications would be increased, if they were under the management of Government?—Representatives from the Chambers of Commerce of Liverpool, Derby, Hull, and I think Manchester and Edinburgh, will come before you bye-and-bye, to depose to that effect.

88. Will you just explain to us the peculiar facilities which the Post Office possesses from the amount of its stations, if I may so call them, for extending telegraphic communication?—I would say first, that the Post Office has a large number of money-order offices, which it has opened with direct regard to the requirements of the population. The money-order offices are always in the centre of the population which they serve; as a rule, we open a money-order office wherever we expect that 12 money orders a week will be issued from it; but we constantly accord to places which are separated by a hill or a river, or a considerable length of road from their nearest money-order office, the accommodation which such an office will give, even although we do not expect that more than one money order per working day will be issued at the newly opened office.

89. Referring to what my learned friend, Mr. Rodwell, said about those maps on the wall, do we understand that each of those dots indicates the position of a money-order office?—At least that, and it does something more than that. At the close of last year we had in the United Kingdom 3,700 money-order offices; that was one money-order office to every 1,450 inhabited houses, and the position of nearly 3,000 of those offices is shown on those maps on the wall. Those dots represent towns and villages having one or more money order-offices in them, and all the dots without exception, whether they are marked in black, or whether they are marked in plain red, represent towns having one or more money-order offices. In London, which is only represented by one dot, there are upwards of 400 money-order offices; in Liverpool there is but one dot, and there are 40 or 50, and in Manchester, I think, as many. On the map of England and Wales there are 2,056 dots, representing money-order towns and villages. The dots which are marked with a black vertical line indicate the towns near to which there is a telegraph station where the attendance is not continuous, or where the messages are sent out by chance messages only. The red dots which are marked with a black cross indicate the towns near which there is a telegraph station open regularly for business, and with a proper force of messengers to carry out the messages. The dots which are left plain indicate the towns which have no telegraph station near to them. I said that on the map of England and Wales there are 2,056 dots; 567 of those have imperfect telegraphic accommodation; 648 have perfect telegraphic accommodation, and 850 have no telegraphic accommodation. In Scotland there are 385 dots, indicating towns and villages having money-order offices; 92 have an imperfect accommodation; 97 a perfect accommodation, and 196 none. In Ireland there are 509 towns and villages having money-order offices; 33 have an imperfect telegraphic accommodation; 109 a perfect accommodation, and 367 none.

90. I believe there are many telegraphs which are not maintained for railway purposes, but which are used for public purposes, also at stations?—Yes.

91. Can you tell us anything about their experience?—One of the Telegraph Companies has a charge book, I believe it is called, and that embraces 622 towns and villages; at 223 of those places the station-master or his subordinates work the telegraph, and the public are cautioned in the following terms with regard to those stations:—"The station-master is permitted by the Railway Company to send

send and receive messages to oblige residents, but as his duties are manifold, expedition in the transmission of messages to or from those stations cannot always be relied on."

92. That is the Telegaph Company's own notice?—Yes, that is the company's own notice. The company also work to and from 350 auxiliary railway telegraph stations, charging, I believe, an additional fee, which is the remuneration of the station-master, so that it may be said that attendance is continuous at only 41 per cent. of their stations.

93. I see there is no outline of counties or towns on these maps; can you give us any idea of the relative proportion of telegraph stations that are within the town in the midst of the inhabitants, and those that are away from it at a distance?—We endeavoured at first to show that on the maps, but we found it impossible unless we had quite covered the room; but I believe that at 1,300, at least of the 2,000 towns and villages marked on the map of England and Wales, there is no telegraph station within the town limits. In Scotland and Ireland the proportion of stations out of the town limits is much higher.

94. Have you any idea of the average distance from the town where the stations are outside of it?—From the nearest money-order office the average distance is three-quarters of a mile, I believe.

95. That is to say your system will bring the place three-quarters of a mile nearer the people than at present?—Yes, on the average; and it would bring it much closer, I believe, in some cases.

96. In very many instances?—Yes.

97. With regard to the radius within which there is a free delivery at the various stations, would that be very much increased if you adopted the rule of making every money-order office a telegraph office also?—Undoubtedly, as the senders and addressees of telegraph messages would then respectively be nearer than they now are to the dispatching and receiving offices, the difficulty of sending a message would be reduced, the rapidity of its transmission would be increased, and the charge for extra porterage would be more often avoided.

98. You have spoken of telegraph stations at which there is intermittant attendance, and of some at which there is constant attendance; do you know what the average attendance per day is, I mean the number of hours?—No, I am not prepared to say that.

99. But you can tell us, with regard to your own money-order offices, at what period of the day they are accessible to the public?—They are open for money order business from nine in the morning till six in the evening, but they are open for other portions of the business during a much longer period; they might all be kept open from seven till eight, and in a great number of cases they might be kept open till ten, while a large number might be kept open all night, and a much larger number than those telegraph stations which are now kept open all night.

100. I believe that it is very difficult to get a telegram sent at night in the majority of places?—Yes, except to or from large towns.

101. But with your multiplicity of locations you could have no difficulty here and there in having that facility given to the public?—It is not merely the number that we have, but necessarily a great part of the Post Office business is done at night, and therefore we have somebody on the spot.

102. As to the subject of working the telegraphs, certain difficulties would be started here and there as to the incompetency of the Post Office officials in the country to work the telegraph; what do you say to that?—In the first place, I may say that as we should of necessity employ nearly the whole staff of the existing companies, I do not know why our difficulties should increase from the mere fact of their change of masters. They would work just as well for us, no doubt, as for their old masters. But a difficulty has been raised with regard to small villages, and it has been supposed that we could not obtain persons there who could work the telegraph instruments. No doubt we should have very great difficulty in teaching them in a reasonably short time to work the Morse instrument, but no one could imagine that we should have any difficulty in teaching them to work Sir Charles Wheatstone's A. B. C. instrument, which is now in use in warehouses, docks, factories, and offices, in many parts of the kingdom, and is worked constantly by boys. We have got one in the building at this moment worked by boys, and I will undertake to say that it did not take two days to teach any one of those boys the use of it.

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103. That is not a mere poetical expression an A. B. C. instrument, it is a literal one?—Yes, it is a literal one.

104. It is an instrument which the letters of the alphabet being indicated you simply have to touch the letter?—Yes.

105. So that any boy who could spell a word on paper could do it with his finger ends?—Undoubtedly; you can see it in operation in 100 places in the City.

106. I believe they are begining to be largely used for ordinary purposes?—Very largely.

107. You do not see any difficulty in having the instruments properly manipulated even at remote places in the country?—No.

108. Have you also had it under your attention, that your increased business in telegraphy would enable you to employ a superior class of men to those who are only now partially employed in the letter business?—Undoubtedly. We are constantly blamed for the small amount of remuneration that we give to the sub-postmasters in little towns and villages; but the reason why the remuneration is small is, that we have a very small amount of duty indeed to give them, and the remuneration must be in proportion to that. When we add additional duties, as for instance when we convert an ordinary receiving office into a money-order office, and then into a savings bank, we give additional pay, and we can always get a better class of man, and that better class of man not only does the new work well, but he does the old work better than the man who was employed for the old work only. We expect to derive a like advantage from having telegraphic business in small towns and villages, and we think that the effect of the transfer will be to reduce the number of those postmasters who look to other avocations, to their shops, for instance, for employment, and to increase the number of those who give us their whole time and service, and who are, of course, the most efficient of our people.

109. Have you found in practice, during the last seven years, that the establishment of your savings bank business has attracted to you a better educated class of men than you were in the habit of getting before?—Undoubtedly; and the previous establishment of the money-order business had the same effect.

110. Independently of your money-order offices, which are so numerous, do your post offices and pillar boxes also afford in another way means for transmitting messages more rapidly than at present?—Yes; we have, over and above the 3,700 money-order offices, about 13,000 receptacles for letters, half of which are receiving offices and half are pillar boxes. Taking the whole number of receptacles for letters, there is one to every 300 inhabited houses. Those receptacles for letters are cleared of the letters deposited in them at fixed and known hours of the day, and the Post Office could give to the public the facilities of depositing in them telegraphic messages, written on stamped paper, with the certainty that the messages deposited therein would, at a fixed hour, be taken out of the receptacles and carried without delay to the nearest telegraph office for immediate transmission by wire to its destination.

111. In comparison with the population, what advantages do those means offer?—We should give every 1,450 inhabited houses a telegraphic office in their centre, and we should give to every 300 houses a place of deposit from which the telegraphic message would be carried free of charge to them, at a fixed hour, to the place from which it would be taken by the wire.

112. Then all your communications from the money-order offices would be strictly telegraphic, and from the post offices and pillar boxes partly postal and partly telegraphic?—Undoubtedly.

113. The object being to give it conveyance by post to the nearest telegraph station, instead of putting the sender of the telegram to the expense or trouble of sending it himself?—Yes.

114. Do you propose to do that without a postal charge?—Without any charge beyond the maximum charge of 1 *s*.

115. Not an additional postal charge beyond the telegraph charge?—No; I should say that the illustration that I am now going to give was drawn up two years ago, and possibly the circumstances as regards the telegraphic office in that particular case may have altered; but no doubt I could find many similar cases at the present day. This was the case at the time I wrote: the residents in Lampeter, if they desired to send messages to London through Carmarthen, which, though

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though 24 miles distant from them, is their nearest telegraphic station (it may not be the case now, and I do not know that it is now), would know that if they wrote their messages on stamped paper and deposited them at the Lampeter office by a quarter past one in the afternoon, the messages would go forward at that hour free of extra charge, and reach Carmarthen for immediate dispatch at half-past four. Thus also messages might be posted at Fort Augustus up to 20 minutes to 12 at night for transmission over a distance of 35 miles to Inverness, the nearest telegraph office, where they would arrive for immediate dispatch by telegraph at 20 minutes past nine in the morning. Now, for the transmission of a letter and a reply thereto between Lampeter and London, 44 hours are required; but for the transmission of a message and the reply thereto between the same places on the partly postal and partly telegraphic system which I have described, less than half that time would be required. That is to say, for 2 *d.* you could get a letter and reply in 44 hours, and for 2 *s.* you could get a telegram and the reply in 22 hours. So again, the course of post between Fort Augustus and London would, on the plan which I have described, be shortened by a period of from 2 to 2½ days; so that by paying 2 *s.* instead of 2 *d.*, you could gain from 2 to 2½ days in that correspondence.

116. You have spoken of your money-order offices as offering you great facilities as regards the transmission of money; I suppose ordinarily now that is done by course of post, advices as to money orders?—The Electric and International Company have always had a money-order system, and we also should have a money-order system; but it would be extended to a very much greater number of offices than we have hitherto been able to employ for that purpose.

117. Would there, then, be any difficulty, if you had the whole control of the telegraphs, to carry on your money-order system by means of the telegraph at every place?—When the public desired it, and they paid a corresponding charge, there would be no difficulty.

118. In fact, it follows almost as a necessary sequence, that if your telegraph runs to every one of your money-order offices, you can communicate by telegraph, rather than by any other means, for the carrying on of your own business?—Undoubtedly.

119. With regard also to your uniformity of rate, that of itself offers particular facilities for sending messages that are so sent by post from the use of adhesive stamps or stamped paper?—Yes, the obstacle to the use of stamps hitherto has been the want of knowledge on the part of the public of what the telegraph message would cost them, and, consequently, what stamps they should put on. When the rate is uniform there would be no more difficulty in using a stamp than there is in using a stamp for a letter. A question was raised as to what we should do if a telegraphic message insufficiently stamped were deposited in a pillar box, or in an ordinary letter box. The answer is, that we should do just what we now do with a letter that is insufficiently prepaid. We endeavour to get the deficiency from the addressee; we do not always succeed, and, perhaps, we should not always succeed in the case of telegraphic messages, but the message would go forward all the same, and the risk would lay upon us.

120. With regard to the uniform rate, another idea strikes one; you have spoken, although to a very limited degree, of the existence of 6 *d.* rates; it might be considered, on the part of those who have that advantage, a hardship to make them pay a uniform rate of 1 *s.*; what do you think of that?—The illustrations that I have already given to the Committee, I think, go to show that, practically, the 6 *d.* rate does not exist; and that when you come to add the porterage, which, by reason of our going so much closer to the population, would not have to be paid by them, and would be covered by 1 *s.*; when you come to add all the porterage to the 6 *d.* rate, the charge is practically higher, or, at least, as high as ours would be.

121. Those are matters of detail to a great extent; is there anything of novelty which is embodied in the idea of giving the Post Office the control of the telegraph beyond the proposition itself?—I am almost ashamed to say that I have not had the honour to originate anything with respect to this. Every part of the scheme has been borrowed from somebody else, and has been tried successfully elsewhere. The amalgamation of the telegraphic and postal administrations has been tried in Victoria and New South Wales, in Belgium, and in Switzerland. I believe that it was introduced with Victoria and New South Wales by Mr. Childers. It has been also tried to a certain extent in France,

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where the telegraph offices in the rural districts are mostly at the post offices. A uniform tariff, irrespective of distance, and with even a lower maximum than we now propose, has been tried in Denmark, the Netherlands, Belgium, and Switzerland. The institution of places of deposit for messages, in addition to the offices of transmission, has been tried in Belgium, and the gratuitous grant of postal facilities, under certain conditions to the senders and receivers of telegraphic messages is also borrowed from that country. Telegraphic stamps, which have been tried here, I may say are in use in Belgium and France, and a telegraphic money-order office has for some years existed in Switzerland and Prussia.

122. With regard to the direction of the House of Commons to this Committee, so far as one may take the liberty of referring to them, let me ask you, if you have anything to say upon the question of legal monopoly, which is the first instruction; you have a legal monopoly for letters at this moment?—Yes.

123. That is to say, the rest of the world are prohibited from carrying them?—Yes.

124. If legal monopoly has used in this instruction means that as regards telegraphs, do you approve of it or not?—No. We neither ask for it nor do I think we ought to ask for it.

125. The Bill in its present form does not seek for it?—No.

126. As my learned friend Mr. Rodwell said, if you do the work better than anybody else, of course it will be a practical monopoly?—So long as we do the work well, with such an organisation as we have, we can defy competition.

127. But you are not, as in the case of letters, seeking for any protection?—No, we have it not in the case of the money-order office; but there we defy competition. Anybody could set up a money-order office to compete with us, but if we cease to do the work well, I think that the public should be left free to take it into their own hands. In fact, on the whole, I am inclined to think that a legal monopoly would be a disadvantage instead of an advantage to us. If we had it, inventors and patentees of improvements, or so called improvements in telegraphic instruments and apparatus, would have to look to us, and to us only, for the use of their inventions, and even if those inventions were worthless, they would be able to make a strong appeal to us to try them, because there would be nobody else who could try them; but, on the other hand, if we had not the legal monopoly, and we declined to try inventions of real merit, the inventors would have some chance of finding others to carry them out.

128. With regard to improvements, do you think that the Government would be less likely to take up any known and real improvements in telegraphic instruments than the companies would?—On the whole, I think that the Government would be more likely to take up new improvements. In one respect, we should be on nearly the same footing as the Telegraphic Companies have been with regard to improvements. When a Telegraph Company has had a large amount of capital locked up in any particular kind of instrument, it has naturally hesitated to employ another instrument, even although it might have great superiority over the existing one; and the Government, to a certain extent, would have the same disinclination; but the disinclination would not be quite so strong, because the companies have to find a dividend, and a good dividend, for their shareholders; whereas the Government need only make its system self-supporting. But there is another reason why I think that the Government would be more likely to take up new improvements, and that is, that no pressure whatever can be put upon a commercial company to adopt any particular instrument, however good it may be. They have always this answer, "We do not want it, and we will not take it." But any amount of pressure could be put upon the Post Office through Parliament to use a new instrument, if it is one of acknowledged merit.

129. Now, as to the second point of giving the Postmaster General the discretion as to making special arrangements as to messages or news, and as to reducing the rates, and particularly, perhaps, with regard to news, in which the press are greatly interested?—At a very early date I began to consider the relations between the press and the Telegraph Companies, and those which it would be necessary to maintain with the press after the transfer; and I have had communications with the representatives of all the newspapers in the provinces. At present the Telegraph Companies maintain what is called an Intelligence Department, for the collection of news which they transmit to the press at rates considerably

siderably below those charged to the public. They also let special wires during the night to such of the provincial papers as will hire them for the transmission of Parliamentary and other intelligence. The Post Office does not contemplate the collection of news for the press.

130. Do the Telegraph Offices do that?—The Telegraph Offices do, by their Intelligence Department, collect news for the press. We do not propose to do it; we think that our officers could not be properly qualified for such a task, which is really that of editing a newspaper at a distance; and if they did undertake it they would be continually charged as, I believe, the Telegraph Companies themselves have been charged, with collecting what was not wanted, and not collecting what was wanted. Neither do the newspaper proprietors wish the Post Office to collect news; they have long wished to (at least so they tell me, and so they will tell the Committee) take the collection of news out of the hands of the Telegraph Companies, and they are looking forward, after the passing of this Bill, to the establishment of one or more news agencies which shall collect news from all parts of the kingdom, on recognised editorial principles, well understood by themselves, and then hand them over to the Post Office for transmission at rates not higher than those which are now paid.

131. Then you would become that which, in fact, you are only intended to be, namely, the transmitters of messages rather than the creators of messages?—We should have no more to do with the nature of the news which we transmit than we have with the contents of the letters which we carry.

132. I do not know whether I ought to ask you to vindicate the character of a public office, but hints have been thrown out that the Post Office might give the priority to important speeches from high quarters; do you think that that might be prevented even if it was probable?—We should not have anything to do with it; it would not be for us to say whose speech should be transmitted; the news agencies would collect the speech and bring it to us to transmit, and if we refused to transmit it, it would be at our own peril; no department having undertaken to transmit news could refuse it any more than they could refuse to take a letter.

133. You think that an imaginary rather than a real difficulty?—Entirely imaginary.

134. I understand you to say that the press will be represented in evidence here to give their views upon the subject if wished?—Yes.

135. Would the Post Office, if it had the control of the telegraphic communication in any case, give the preference to any particular message, and if so, under what circumstances?—Only to state messages which have the right at present; messages which are all defined in the Act of the existing companies.

136. It would be simply doing that which the existing companies do, and are bound to do?—Yes.

137. In protection of the interests of the State?—Yes; with regard to other telegraphic messages we should be prepared to bind ourselves to send them in the order of receipt, and also to undertake that when we send a message out of the order of receipt; as, for instance, when we send messages of the class specified in those Acts, we will put upon them a particular mark, so that at any time they might be called for and laid upon the Table of the House of Commons to show that we did not send messages out of course, which we should not do.

138. In point of fact, there would be no difficulty in drawing a line of demarcation between that which is strictly a Government despatch and that which is ordinarily understood by news or information?—It has been drawn for many years.

139. And would continue to be drawn under the new telegraphic government?—Undoubtedly.

140. Referring to the Act of the 26 & 27 Vict. c. 212, "Bonelle's Telegraph Act, 1863"; I suppose the clause is in the common form, and I will read it; the 21st section says, "If one of Her Majesty's Principal Secretaries of State, or the Board of Trade, or other departments of Her Majesty's Government, required the Company to transmit any message on Her Majesty's Service, such message shall (notwithstanding anything in this or the recited Act contained) have priority over all other messages, and the Company shall as soon as reasonably may be transmit the same, and shall, until transmission thereof, suspend the transmission

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of all other messages." You do not propose to give greater facilities than are indicated by this idea, I suppose?—Certainly not.

141. And you certainly do not propose to deprive the Government of that advantage?—No.

142. I believe in all the Telegraph Acts there are special provisions of that kind, which I need not trouble the Committee by reading?—Yes.

143. As to the question of ensuring secrecy in the first place; I may ask you at once, is there any reason why a Government Department should be less secret than a private joint-stock company?—I do not think that it would be either more or less secret; we should employ precisely the same class of people as the Telegraph Companies employ, and with just the same results; our men would not be one whit more reticent or discreet, but they would be just as reticent and discreet as the others have been.

144. Then, as far as the employers are concerned, there is no reason to imagine that the change of master would create a change of mind or honesty?—No, not at all.

145. So far as responsibility to the public is concerned, which do you think is most liable to be called to account, a private joint-stock company or a public department?—I am sorry to say a public department.

146. I cannot join in your sorrow; I am glad that it is so for our own sake; but, however, of the two a public department is more amenable to reproach and correction than a private company?—Undoubtedly.

147. And therefore for any dereliction of duty with reference to keeping matters secret that ought to be kept so, you think the public are as safe with a public department as with a private company?—Yes, unquestionably.

148. At the present moment you are, in spite of yourselves, I believe, the depositories of an enormous amount of secrets, both public and private?—We are compelled to open about 3,000,000 letters every year, and we have really to search through the contents of a great number of them in order to find out what we shall do with them, and I can say of my own knowledge, of course I could not give illustrations without betraying confidence that I am bound to keep, but I can say of my own knowledge, from 28 years' service in the Post Office, that those letters contain an enormous mass of secrets of all grades of importance; but in the whole 28 years of my service, I have never heard a charge of breach of confidence brought against any one of the clerks in the returned letter office.

149. In speaking of letters of this description as having been opened, it is as well just to say what gave rise to the necessity of their being opened?—They could not be delivered in many cases, and cases even of great importance, from their having no address on them.

150. They were sent in a hurry, under mental anxiety, perhaps?—Yes, I should say under mental anxiety, from the contents of some that I have seen with no address on them; but the majority are insufficiently addressed.

151. Therefore, I say, in spite of yourselves, you are compelled to be the depository of secrets to a very large extent?—It is our duty to become so.

152. Have you ever known, in the course of your 28 years' experience, any difficulty arising from that?—No, never.

153. It would not be more likely to arise with telegraphic despatches, which are known to be open, than with letters which are supposed to be closed?—No; and just let me say that the number of dead letters, about 3,000,000, is about half the whole number of telegraphic messages at present sent, so that the mere comparison of our open letters with those open telegrams does not tell unfavourably for us.

154. I suppose when you have opened a letter, through not finding the sendee, you invariably send it back to the sender, to the name and address that is given on it, if it is there?—Yes; it seems to be a matter of wonder that we have 3,000,000 returned letters, and therefore I had better state that that is only out of about 750,000,000 letters annually which we are called upon to deliver.

155. The figures sound large, but the proportion is more easily realised, now that you mention that fact. While we are on the question of secrecy, there is no difficulty, even in an open telegram, in securing the secrecy of the message, is there, by using a cypher?—None; Sir Charles Wheatstone will be ready to give you evidence upon that point, and other evidence could be obtained, if need be, that systems of cypher, which are really inscrutable, and at the same time perfectly easy, have been devised, and can be used by the public.

156. Could

156. Could you give me any idea, out of the 3,000,000 letters which have to be so opened, what proportion of that number find their way to the sender or sendee?—Three-fourths.

157. Mr. *Hope Scott.*] Do they always go back to the sender?—No; we frequently can get a clue to the proper residence of the addressee, and then they go on to him, but three-fourths go either to the sender or the sendee.

158. Mr. *Sargood.*] In the case of some of them, unfortunately, you cannot find out who send them?—Yes.

159. Neither the writer nor the writee are sufficiently disclosed?—No; and many of them contain property.

160. While on the question of cypher, you say that Sir Charles Wheatstone says that he has found out an undiscoverable cypher?—Yes.

161. So that really there is no difficulty on the question of secrecy?—None whatever.

162. I believe, as to secrecy, there was a great outcry made when the savings banks were established, that every man in a village would know his neighbour's business; have you found any difficulty arising from the betrayal of confidence on that subject?—We have not had one charge, since the Post Office Savings Banks began, against a postmaster or any other officer for the betrayal of secrets, and we have now over 1,000,000 depositors; we have had, of course, more altogether; we have 1,000,000 open accounts at this moment.

163. I do not remember, but I dare say you know and will tell me, whether the Telegraph Companies are under any penalties for the betrayal of telegrams?—I think there is a penalty of 20 *l.*, but I am not quite certain.

164. However, supposing the House or the Committee should think that it would be advisable, in the interests of the public, to make those disclosures even misdemeanours, do you see any objection to that?—None whatever. I should say not merely a money penalty, but a penalty of three months' imprisonment. We have a clause in the Post Office Savings Bank Act which forbids all postmasters to disclose the name or amount of deposit of any depositor, and a breach of that clause is, of course, a misdemeanour.

165. If the Telegraph Companies or the Railway Companies, in the interests of the public, think that a necessary protection, you would not object to it?—Certainly not; it would be waste paper.

166. We now approach No. 4, the delicate subject of submarine cables. Have you here with you to-day any contracts or heads for contracts in writing that you can give me as to the submarine cables?—No.

167. Just let us understand, as far as you are at liberty to give us your views, how many submarine cables are there, do you know?—There are two systems of submarine telegraphic communication with the Continent.

[The Witness withdrew.]

[Adjourned to To-morrow, at half-past Eleven o'clock.

Thursday, 2nd July 1868.

MEMBERS PRESENT:

Colonel Fane.	Colonel Loyd Lindsay.
Mr. Goschen.	Mr. Norwood.
Mr. Graham.	Mr. Potter.
Sir Frederick Heygate.	Mr. Sandford.
Mr. Leeman.	Mr. Charles Turner.

THE CHANCELLOR OF THE EXCHEQUER IN THE CHAIR.

Frank Ives Scudamore, Esq., called again.

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Mr. *Sargood.*] WE had some difficulty yesterday about the production of contracts on each side, and I think it better at once to say that we have contracts that are completed, as to Railway Companies, with the North British and with the Caledonian Railway Companies; and as regards the Telegraph Companies, we have correspondence and proposals which have been modified and accepted, and, from the basis of contract at this moment, with the Electric and International Company, the British and Irish, and the United Kingdom. Of course, I need hardly say that those are precipitated by the requirements of the other side. We did not intend to bring them forward, unless it had been wished and thought proper to do so; because, at any rate, they are subject to the approval of Parliament; and, till they are so sanctioned, they would hardly, I suppose, be considered operative at all. However, in accordance with the suggestions of the Committee and the requirements of my learned friends, I hand these in, so that they may be put on the Minutes; and for that purpose I will put them in through Mr. Scudamore, as a matter of form. These are the two originals in the cases of the Railway Companies; this is the Caledonian, and this is the North British.

168. (To the *Witness.*) Are those the subsisting arrangements between those two companies?—They are.

169. As to the other three, the Electric and International, the British and Irish, and the United Kingdom, they are in the form of proposals and acceptance by correspondence?—They are.

170. Not reduced into contract?—No.

171. The whole of those are, of course, entered into, subject to their being recognised and approved by Parliament?—Yes.

172. Mr. *Merewether.*] Will you read them?—This is my letter, addressed by me to the Chairman of the British and Irish Magnetic Company:

General Post Office, London,
25 June 1868.

Dear Sir,

With reference to the previous communications which have taken place between us on the Electric Telegraphs Bill, I am instructed, with a view both to save further expense to the companies and to facilitate the passage of the Bill this Session, to submit to you the proposal for purchase which is set forth on the enclosed Paper. It is, of course, to be understood that this proposal is made by me, and is to be considered by you without prejudice, and that it is not to be binding if it be not accepted now, or if the Bill be not passed within the present Session. Under the circumstances of the case I must beg the favour of an immediate reply. A letter, similar in terms to this, has been addressed to the Electric and International and United Kingdom Companies. I am, dear Sir, faithfully yours, *Frank Ives Scudamore.* To W. Langton, Esq.

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This is the enclosure referred to.

Subject to the approval of the House of Commons. Memorandum. 1. The purchase of the property of all the companies shall be simultaneous. 2. The price to be paid to the Electric and International, and British and Irish Magnetic Companies, shall be 20 years' purchase of the present nett profits of those companies. 3. The price to be paid to the United Kingdom Company shall be, A. twenty years' purchase of the present nett profits of the company, plus B. the sum paid for the patent of the Hughes Type Printing Telegraph, and which, subject to verification, is taken to be 12,000 *l.*; and plus C. the highest market quotation of the ordinary shares between the 1st June 1868 and 25th June 1868 (to be paid for the ordinary shares), together with what an arbitrator shall give in consideration of the prospective profits of the company, and of the efforts of the company to establish a uniform shilling rate. 4. The principle of compensation to officers not provided for by the Post Office, to be admitted in the case of officers engaged at yearly salaries, and having served for not less than five years in any Telegraph Company or companies. 5. Arbitration in case of difference to be in the following manner: each party to choose an arbitrator, and the two arbitrators failing agreement to choose an umpire. 6. This proposal is without prejudice to either side, and is not to be binding if not accepted now, or if the Bill be not passed in the present session of Parliament. Dated 25th June 1868.

It is unnecessary for me to read the letters to the two other companies; they were identical. This is the answer of the British and Irish Magnetic Telegraph Company:

30th June 1868. Dear Sir,—I beg to acknowledge the receipt of your letter of the 25th June, enclosing a memorandum of the terms of a proposal which you have been instructed, on behalf of the Government, to submit for the purchase of the Telegraph Companies, and I have to inform you that, on behalf of the British and Irish Magnetic Telegraph Company, I agree to the terms of the proposal as therein stated, so far as they relate to that company. In so doing, it is right I should draw your attention to the fact, with which you are already acquainted, that you will, as such purchasers, have the benefit of, and be subject to the liabilities attaching to, an agreement with the Submarine Telegraph Company. The Clause No. 4, however, may not be sufficiently definite to afford to the company's officers that fair compensation to which their past services fully entitle them, and it will be necessary to amplify it by adding or substituting the following: "Compensation to be given to officers or clerks who have been not less than five years in the service of any Telegraph Companies, and who shall not be willing to accept such appointment as shall be offered to them by the Post Office. Such compensation shall be an annual sum equal to two-thirds of the present annual emolument of an officer or clerk who has been for 20 years or upwards in such service, and to be diminished in the case of officers or clerks who have been less than 20 years, by one-twentieth for every year less of such service. Officers and clerks who enter the service of the Post Office shall be entitled to count their past years of continuous service with the Telegraph Companies as years passed in the Civil Service of the Crown; and all such officers and clerks shall, upon their appointment, be deemed to be, to all intents and purposes, Government officers and clerks, and shall be entitled to the same, but no other privileges." I shall be glad to hear that you coincide in this view, and the engagement between us will then be complete.—I am, dear Sir, yours faithfully, *W. Langton.*

The letter from the Chairman of the Electric and International Telegraph Company, Mr. Grimston, is identical with that I have already read, with the exception that there is no proviso as to the rights of the Submarine Telegraph Company. The letter from the United Kingdom Company differs so far from the others that the terms offered to the United Kingdom were different.

173. Mr. *Hope Scott.*] They are accepted?—Yes; in all other respects they are the same.

(*The Letters of the Electric and International Telegraph Company, and the United Kingdom Company, were handed in, and are as follows*):

The Electric and International Telegraph Company,
Secretary's Office, Telegraph-street,
London, 30 June 1868.

Dear Sir,

I have to acknowledge the receipt of your letter of the 25th day of June, containing the terms proposed by the Government for the purchase of the property of the Electric and International Telegraph Company, that is to say, 20 years' purchase of the present nett profits, and to state that my directors accept these terms on behalf of their proprietors, together with the fifth provision of your letter, provided you, on behalf of the Government, are prepared to substitute the following provision, as respects the compensation to the officers for your fourth proposition: "Compensation to be given to officers or clerks who have been not less than five years in the service of the Telegraph Companies, and who shall not be willing to accept such appointment as shall be offered to them by the Post Office. Such compensation shall be an annual sum equal to two-thirds of the present annual emolument of any officer or clerk who has been for 20 years or upwards in such service, and to be diminished in case of officers or clerks who have been less than 20 years,

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20 years, by 1-20th (one-twentieth) for every year less of such service. Officers and clerks who enter the service of the Post Office shall be entitled to count their past years of continuous service with the Telegraph Companies as years passed in the Civil Service of the Crown; and all such officers and clerks shall, upon their appointment, be deemed to be, to all intents and purposes, Government officers and clerks, and shall be entitled to the same, but no other privileges."

I am, dear Sir,
Yours faithfully,
(signed) *Robert Grimston*,
Chairman.

United Kingdom Electric Telegraph Company (Limited),
237, Gresham House, Old Broad-street,
London, 30 June 1868.

Dear Sir,

On behalf of this company I accept the proposal for the purchase of the company by the Government, submitted on the Paper enclosed in your communication of the 25th instant, namely Clause 1, and

3 A. Twenty years' purchase of the present net profits of the company, plus

B. The sum paid for the patent of the Hughes' Type Printing Telegraph, and which, subject to verification, is taken to be 12,000 *l.*, and plus

C. The highest market quotations of the ordinary shares between the 1st June 1868 and 25th June 1868 (to be paid for the ordinary shares), together with what an arbitrator shall give in consideration of the prospective profits of the company, and of the efforts of the company to establish a uniform shilling rate.

In so doing, it is right I should draw your attention to the fact with which you are acquainted, that you will, as such purchasers, have the benefit of, and be subject to the liabilities attaching to, this company's agreement with the Anglo-Danish and Russian Telegraph Company.

Clause No. 4, however, may not be sufficiently definite to afford to the company's officers that fair compensation which their past services fully entitle them to, and it will be necessary to amplify it by adding or substituting the following:—

"Compensation to be given to officers or clerks who have been not less than five years in the service of any Telegraph Companies, and who shall not be willing to accept such appointment as shall be offered to them by the Post Office.

"Such compensation shall be an annual sum equal to 2-3rds (two-thirds) of the present annual emoluments of an officer or clerk who has been for 20 years or upwards in such service, and to be diminished in the case of officers or clerks who have been less than 20 years, by one-twentieth for every year less of service. Officers and clerks who enter the service of the Post Office shall be entitled to count their past years of continuous service with the Telegraph Companies as years passed in the Civil Service of the Crown; and all such officers and clerks shall, upon their appointment, be deemed to be, to all intents and purposes, Government officers and clerks, and shall be entitled to the same, but no other privileges."

I shall be glad to hear that you coincide with this view, and the engagement between us will then be complete.

Clauses 5 and 6 are also accepted.

I am, dear Sir,
Your faithful servant,
(signed) *M. Angus Croll*,
Chairman.

Witness.] These companies all proposed to make an alteration in the clause of our proposal which related to the compensation of the officers, and I should say, subject to the approval of this Committee, that the substitution was agreed to.

174. Mr. *Sargood.*] Having read the treaties with the Telegraph Companies, will you now read the contracts with the Railway Companies?—This is the agreement with the North British Company—

Heads of Agreement between Her Majesty's Postmaster General and The North British Railway Company. The telegraph wires, poles, instruments, and apparatus now belonging to the Railway Company shall remain the property of the company, and be subject to their control absolutely, but to be used by the Railway Company for the following purposes only; that is to say, the use of the block system, the allocation of the rolling stock of the company, the transmission of information as to the position of trains running upon the line, and the conveyance of all other messages relating to the traffic or business of the company. The company reserve their full right to increase, alter, and extend their existing wires and apparatus, and to use such additional or other wires or apparatus for the purposes aforesaid, but not otherwise. The company may also, notwithstanding this agreement, and without payment to the Postmaster General, from time to time make arrangements with coal-masters, iron-masters, and traders generally, upon the

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North British system, for the erection and working of private telegraphs between coal-pits, iron-works, factories, and the stations of the company, but such telegraphs shall be used for the transaction of private business only between the Railway Company and the parties with whom such arrangements may be made, and no money payment shall be made or received in respect thereof, except by way of annual rent or payment. The Railway Company will at any time, upon the request of the Postmaster General, give their consent in writing, or otherwise, as the case shall require, to the purchase by the Postmaster General of the benefit of any and every existing agreement between the Railway Company and any company for telegraphic purposes, and it shall be lawful for the Postmaster General, at any time after any such purchase, to use all the privileges to which the selling company was entitled as between such company and the Railway Company. It shall be lawful for the Postmaster General to erect such new poles as he shall think fit along the company's lines of railway and thereon, or on the existing poles of the company, to put up such new wires or apparatus as he shall think fit; and in respect of any such new wires, poles, or apparatus which shall be erected by the Postmaster General, otherwise than as the assignee of an existing agreement between the Railway Company and some Telegraph Company, the Postmaster General shall pay to the company such sum per annum as shall be agreed upon, or in case of difference as shall be determined by arbitration. The Postmaster General shall pay to the Railway Company the following sums by way of compensation: First, twenty years' purchase of the present value of the trade receipts from telegraphic messages of the company reckoned on the basis of the receipts for the week ending the 5th day of June, One thousand eight hundred and sixty-eight, which sum shall, subject to verification, be taken to be the sum of Forty-eight pounds seventeen shillings and one penny, or at the rate of Two thousand five hundred pounds per annum; second, twenty times the amount of the estimated average annual increase of trade receipts from telegraphic messages, such annual amount in case of difference to be settled by arbitration; third, such sum as shall be agreed upon, or, in default of agreement, as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of dispatching free messages over the wires of the Electric Telegraph Company, to which privilege the company are entitled for the term of fifty years, or thereabouts; fourth, such sum as shall be agreed upon, or, in default of agreement, as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of granting way leaves and making arrangements with other Telegraphic Companies on the North British system. The Railway Company shall, if required by the Postmaster General so to do, from time to time receive messages for transmission by telegraph from the public, and shall transmit the same either to their place of destination, if upon the company's lines, or to some convenient post office as shall be arranged; and in respect of such receipt and transmission the company shall act as agents of the Postmaster General, and shall receive in respect thereof such remuneration as shall be agreed upon, or, in case of difference, as shall be settled by arbitration, except, as aforesaid, the Railway Company shall not transmit or permit the transmission of any telegraphic message through their wires for the time being. The company shall, if required by the Postmaster General so to do, maintain the Government wires upon such terms as shall be agreed upon, or, in case of difference, as shall be settled by arbitration. This agreement shall not come into operation until the Postmaster General shall commence the working of some line of telegraph in Scotland, or until the Postmaster General shall have signified in writing, his desire that the same should take effect. All questions by this agreement referred to arbitration shall be fixed and determined by two arbitrators, mutually appointed by the parties hereto, or, in the case of difference between them, by an umpire to be appointed by such arbitrators. This agreement will be void, unless the Electric Telegraph Bill now before Parliament becomes a law, either in this or in the next session of Parliament. Dated this 26th day of June 1868. *Frank Ives Scudamore* for the Postmaster General. Sealed with the seal of the company, in the presence of *J. Stirling*, chairman, North British Railway Company.

175. Will you read the agreement with the Caledonian Company?—

Heads of Agreement between Her Majesty's Postmaster General and the Caledonian Railway Company. First. The telegraph wires, poles, instruments, and apparatus now belonging to the Railway Company on their lines of railway or canals, shall remain the property of the company, and be subject to their control absolutely, but shall be used by them solely for the working of their railway and canals, and for the transmission of all messages in any way relating to the traffic or business of the company. The Railway Company shall be entitled to increase, alter, and extend to such extent as they may deem necessary, their existing wires and apparatus, and to use such additional or other wires or apparatus for the purposes aforesaid, but not otherwise. Second. The Railway Company may also, notwithstanding this agreement, and without payment to the Postmaster General, from time to time make arrangements with lighthouse Commissioners, and also with coal-masters, iron-masters, and traders generally, upon the Caledonian system, for the erection and working of private telegraphs between coal-pits, iron-works, factories, and the stations of the company, and along their line; but such telegraphs shall be used for the transaction of private business only, between the Railway Company and the parties with whom such arrangements may be made, and their correspondents, and no money payment shall be made or received in respect thereof, except by way of annual rent or payment. Third. On the acquisition by the Postmaster General

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of the undertakings of any of the Telegraph Companies with which the Railway Company have agreements, such agreements shall cease and determine, except as regards the provisions contained therein respectively, as to the payment of rents or way-leaves to the Caledonian Company, and the provisions relating to the carriage of stores, office accommodation, fire and light, and free passage to employés, in regard to all which the Postmaster General shall enjoy the same privileges, but no more, as the Telegraph Companies exercise at present under their respective agreements, and that for the respective periods specified in the said agreements. Fourth. On such requisition as aforesaid all the posts, wires, instruments, and other telegraphic apparatus belonging to the Telegraph Companies on the Railway Company's lines, or on the lines worked by them, which are then employed in connection with the Railway Company's telegraph work, shall become the absolute property of the Railway Company, and shall be handed over to them by the Postmaster General, free of charge, in efficient working order, so that the Railway Company may be in a position at once to take up and carry on their own telegraph work on their own system; and thereafter the maintenance and working of the said posts, wires, instruments, and other telegraphic apparatus, which are now at the charge of the Telegraph Companies respectively, shall be at the charge of the Railway Company. Fifth. On such acquisition as aforesaid the Postmaster General shall be entitled, for the respective periods of the several agreements aforesaid, to use, free of charge, and keep up and maintain, all the wires belonging to the respective Telegraph Companies on the line, and employed exclusively in the transmission of the public telegraph business, which are erected on the poles, to be handed over to the Railway Company under Clause *third*, and he shall also be entitled during such period aforesaid to erect and maintain additional wires on said poles, provided they are sufficiently strong and high for the purpose, and also to erect new poles with wires over any of the sections of the line embraced in the respective agreements between the Railway Company and the Telegraph Companies; but so that such new poles or wires shall not interfere in any way with the convenience or working of the railway or canals of the company, or obstruct the working of the traffic thereon: And, provided always, that all damage done to the works and property of the Railway Company, by and through the operations of the Postmaster General, shall be paid or made good by him. Sixth. It shall be obligatory on the Postmaster General, within three days after receiving notice from the Railway Company to that effect, to shift the posts, wires, and apparatus belonging to him as often as the Railway Company may consider it necessary for the purposes of their works or traffic; but in all such cases the Railway Company shall pay to the Postmaster General the actual costs incurred in shifting such posts and apparatus. Seventh. The Postmaster General shall pay the Railway Company the following sums by way of compensation:—First. Twenty years' purchase of the amount of the whole receipts drawn by the Railway Company for the transmission of public telegraphic messages reckoned on the basis of the receipts of the week ending the Twelfth of June One thousand eight hundred and sixty-eight, which sum shall, subject to verification, be taken to be the sum of twenty-three pounds two shillings and three pence, or say at the rate of one thousand two hundred pounds per annum. Second. Twenty times the amount of the estimated average annual increase of said receipts from telegraphic messages, such annual amount in case of difference to be settled by arbibration. Third. All rents and annual payments payable to the Railway Company by public Telegraph Companies during the still unexpired periods embraced in their respective agreements, and that at the terms mentioned in said agreements respectively. Fourth. Such sums as shall be agreed upon, or in default of agreement as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of granting other way-leaves and making future arrangements with other Telegraph Companies over the northern section of the Railway Company's line. Fifth. Such sums as shall be agreed upon, or in default of agreement as shall be settled by arbitration, as the value of the Railway Company's reversionary interest in the rents for way-leaves from public Telegraph Companies, as would be derived by them on the expiry of the current agreements between them and the respective Telegraph Companies on other portions of their system, as well as the amount of the sum payable in respect of the value of the estimated increase of revenue from this source. Sixth. Such sums as shall be agreed upon, or in default of agreement as shall be settled by arbitration, as the value of the Railway Comany's reversionary interest in the telegraph receipts from public messages on certain sections of their line, on the expiry of the agreements with the respective Telegraph Companies, which prevent the Railway Company at present from earning revenue from this source, as well as the amount of the sum payable to the Railway Company in respect of the estimated increase of revenue from public telegraph messages on such sections of the line; and in determining the sums payable to the Railway Company under Clauses 5 and 6, the arbitrators or umpire shall have regard and take into view the results of the experience of the Railway Company in working the telegraphs for the public on such portions of their lines as they have so worked. Seventh. The Postmaster General shall be bound either to transmit the Railway Company's message to or from any "Foreign Station" in the United Kingdom free of charge, or to compensate the Railway Company for this privilege in the event of his determining to withdraw it any time. Such compensation to be determined by agreement between the parties, or failing agreement to be fixed by arbitration. Eighth. On the expiry of the respective periods specified in the agreements aforesaid, the Postmaster General shall have a perpetual right of way for his poles and wires over the whole of the

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Railway Company's system, and in consideration thereof he shall pay to the Railway Company such sum per mile per wire over the whole line by way of yearly rent as shall be determined by agreement between the parties, or failing agreement as shall be fixed by arbitration. Eighth. The Railway Company shall, if required by the Postmaster General so to do, from time to time receive messages for transmission by telegraph from the public, and shall at the Postmaster General's sole risk and expense transmit the same, either to their place of destination if upon the Company's lines, or to some convenient post office as shall be arranged, and in respect of such receipt and transmission the company shall act as agents of the Postmaster General, and shall receive in respect thereof such remuneration as shall be agreed upon, or in case of difference as shall be from time to time settled by arbitration. Ninth. Except, as aforesaid, the Railway Company shall not transmit, or permit the transmission of any telegraphic message through their wires for the time being. Tenth. The company shall, if required by the Postmaster General so to do, maintain the Government wires and poles upon such terms as shall be agreed upon, or in case of difference as shall be settled by arbitration. Eleventh. All questions by this agreement referred to arbitration, shall be fixed and determined by two arbitrators, mutually appointed by the parties hereto, or in the case of difference between them by an umpire to be appointed by such arbitrators before they proceed upon the matters referred to them. Twelfth. This agreement will be void, unless the Electric Telegraph Bill now before Parliament becomes a law, either in this or in the next Session of Parliament. In witness whereof these presents written upon this, and the two preceding pages of stamped paper by Henry Bertram Gaunt, clerk to Messieurs Vacher and Company, Law Stationers, Parliament-street, Westminster, are (together with a duplicate hereof) subscribed by Frank Ives Scudamore, Assistant Secretary of the Post Office, London, as duly authorised by, and taken burden on him for Her Majesty's Postmaster General at London, upon the Thirtieth day of June Eighteen hundred and sixty eight years, in presence of these witnesses, Elial Breton Osborn and Samuel William Cosserley, both clerks in the General Post Office (Solicitors Department), London; and by Sir Thomas Gladstone of Fasque, Baronet, and Daniel Ainslie, Esq., of the Gart Callender, two of the directors of the Caledonian Railway Company, for and on behalf of that company, at London, on the said Thirtieth day of June, and year foresaid, in presence of these witnesses, Robert Mackay and James Mackay, both Writers to the Signet in Edinburgh, presently in London, the seal of the Caledonian Railway Company being also at the time and place last mentioned affixed hereto."

176. Mr. *Hope Scott.*] We have not the agreements with the Electric Telegraph Company referred to in the Caledonian agreement. Have you those; they are referred to and made part of that agreement?—We have not got them with us, we will produce them.

177. *Chairman.*] What part of the telegraph system of Scotland do those two companies represent?—(*The Witness pointed out the systems.*)

178. Mr. *Sargood.*] The Electric and International Company are the owners of two cables, are they not, going from Lowestoft to Holland?—They are.

179. Is there also an additional cable known as the Reuter Telegraph Cable which is worked by them?—Yes, it is practically leased from Reuter's Company and worked by the Electric and International Company.

180. The submarine cables between Calais and Dieppe and this country belong to another company?—The Submarine Telegraph Company are possessed of cables between Dover and Calais, Dover and Ostend, and Newhaven and Dieppe.

181. That is the whole of the present continental submarine system?—Yes, at present existing.

182. Is it your proposal under the working of this Bill, if it becomes law, to acquire the property in those cables as belonging to companies existing in the United Kingdom?—Our proposal necessarily is to acquire the cables belonging to the Electric and International Company as a part of the undertaking of that company. If we acquire the property of that company we also derive from them their obligations, and we shall therefore be bound to Mr. Reuter in the terms of their agreement with him. Further than that, if we acquire the property of the British and Irish Magnetic Company, we shall be bound to the Submarine Telegraph Company by terms of the agreement between that company and the British and Irish Magnetic Company.

183. I believe, with regard to the leasing that was spoken of yesterday, Clause 8 of the Bill, which gives power to the Postmaster General, with the consent of the Lords Commissioners of Her Majesty's Treasury, to lease any part or parts of the undertaking, has been inserted in contemplation of that acquisition in case you should not care to work the cables yourself?—It has.

184. That clause probably is specially aimed at the submarine cables rather than anything else?—It was exclusively aimed at the submarine cables. I may state

state further that we are at present in communication with Mr. Reuter and with the Submarine Telegraph Company, and probably by Monday we may be able to state to the Committee that some definite terms have been agreed to.

185. I dare say you are in communication with other parties?—Yes.

186. Whatever has resolved itself into definite engagements between you and others has been brought forward this morning?—Undoubtedly.

187. I think, in addition to the negociation with the Telegraph Companies, you have also had some negociations with the Railway Companies in reference to their interests?—I should rather say I have endeavoured to have negociations with the Railway Companies.

188. Will you tell the Committee what you have done with reference to the Railway Companies?—At the commencement of March, I am not quite certain of the date, but probably the first or second of March, a deputation from the Railway Companies waited on the Chancellor of the Exchequer to state their objections to the Bill. I was informed by the Chancellor of the Exchequer that he had requested them to communicate with me, and to state to me the nature of their requirements. I put myself in communication with them through Mr. Blenkinsop, who, I understood, acted as solicitor to them, and begged of him that he would endeavour to obtain for me an interview with them so that I might ascertain what their objections to the Bill were, and what arrangements we could make which would be satisfactory to them. About the 4th of April he obtained an interview for me with the representatives of some of the leading companies, I think the London and North Western Company, the Great Western Company, the Midland Company, the North Eastern Company (and I think the Great Northern Company, but I am not quite certain) were represented on that occasion; the manager of the North British Company was also present.

189. Had you then a draft of the Bill ready for discussion with them?—Yes.

190. Did you go through it with them?—Yes, I went through it with them, and they started several objections to it, and asked for explanations, which explanations I gave, and which objections I answered as well as I could; I then begged of them to consider whether they could not make some statement of their requirements, so that the Government might consider whether those requirements could not be fully met, and they undertook to endeavour to do so. The Easter holidays were then just coming on, and they said, for various reasons, it would be impossible for them to consult and make that statement for a fortnight or three weeks, but they would endeavour to do so in the meantime.

191. Were they successful in their endeavours to state their own views?—No, I believe not; about the 8th of May I was informed by Mr. Blenkinsop that they had been unable to draw up any statement of terms which would be satisfactory to them; about that time Mr. Leeman gave notice, I presume, on their behalf, of his intention to move that the Bill be read a second time in six months.

192. The subject of the companies being under numerous contracts, of course was not lost sight of?—Certainly not.

193. Did you request them to inform you what the nature of the contracts was, which now form the little library we have here, or a portion of it?—I did; they informed me that they were at that time in an offensive and defensive alliance with the Telegraph Companies, and they did not think it fair to the Telegraph Companies to show the agreements without the consent of those companies.

194. You, of course, did not oppose that reasonable view at that time?—No.

195. So that till yesterday they had not communicated to you the nature of the engagements which might affect your interest?—Most of those present at the meeting had not. The manager of the North British Railway Company, as you have heard, and the manager of the Caledonian Company, who was not present at that meeting, had stated their requirements, and we had endeavoured to meet them.

196. So far as the companies are concerned, that are now represented by my learned friends since the 7th of May last, you have had no communication from them with a view to arrangement?—Last Saturday I addressed a letter to Mr. Blenkinsop, asking him once more if it would not be possible for them to state

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what their requirements really were. I have received the answer from him that they intended to oppose the Bill.

197. I will ask you this; has the publicity which has been given to this idea of transferring the telegraphs to the Post Office damaged the property of the companies at all, do you know; have the shares gone down in consequence of this idea?—No; the shares of the Electric Company have gone up 30 *l.* in this week, I think.

198. At any rate the ventilation of the subject at present does not seem to have damaged the interests of the companies?—Certainly not.

199. With regard to the South Eastern Railway Company, I think you are in treaty with them; has that come to a crisis?—I think there is no reason to doubt that we shall come to an arrangement with them, and I believe also with the London Chatham and Dover Company, and I may add the London, Brighton, and South Coast Company are considering the matter at present, and I expect to communicate with the South Western Company to-morrow.

Mr. *Vernon Harcourt.*] After what Mr. Scudamore has stated on the subject of the present state of the negotiations with reference to the Submarine Telegraphs, I shall take no further part till Monday; but I hope it will be on the understanding that, if there should be occasion for it, Mr. Scudamore will come back, so that we then can enter into the question.

Mr. *Sargood.*] Certainly.

Mr. Serjeant *Tindal Atkinson.*] I make the same application for the Submarine Telegraph Company.

Sir *Mordaunt Wells.*] And I also for the Anglo-American and the Atlantic Telegraph.

200. (To the *Witness.*) I believe parties have been in communication?—Yes.

Cross-examined by Mr. *Hope Scott.*

201. The South Eastern Company do commercial business on their own line?—They do.

202. Does any other company do commercial business on their line?—The British Magnetic Company do.

203. Do you mean through their district or over the line?—Over their line and in some parts of the district.

204. You know the agreement, as you are in treaty with the South Eastern Company, between the British Magnetic Company and the South Eastern Company?—I am not acquainted with its precise terms, but substantially I believe the British Magnetic Company have way-leaves over the South Eastern Railway.

205. Are their lines mixed up with the lines of the company?—No.

206. They are separate?—They are separate.

207. The South Eastern carry on their business as commercial telegraphists over the whole of their system, and the British Magnetic Company over a portion of the same system?—Yes.

208. But with separate wires?—Yes.

209. With way-leaves, and with the rights to have offices, I suppose?—I cannot precisely answer that question.

210. Do they do any service for the Railway Company?—Yes, undoubtedly; they and the Submarine Company together carry messages on the business of the South Eastern Company to the Continent.

211. But not on the system itself?—I think not; there is no need for that.

212. Do the London and Brighton Company do commercial business?—They do commercial business; I am not in a position at this moment to state any of the other particulars of their arrangements, but they do commercial business.

213. Do you know if any other company does commercial business over their line?—Yes; the Magnetic Company does, I believe.

214. You have not had the opportunity yet of perusing the agreements handed

handed in yesterday?—No; they were only delivered by the printer this morning; I have not been able to look at them.

215. In your arrangements with the Telegraph Companies I see only one of them refers to the existence of an agreement of which you are to have the benefit?—Only one.

216. That relates to the Submarine Company's contract; but the British and Irish Telegraph Company, I apprehend, have contracts with a great many other companies?—Undoubtedly.

217. In making your arrangements with the Electric Telegraph Companies, do you propose to adopt those agreements generally?—Either to adopt them or to substitute for them such other agreements as shall be satisfactory to the corresponding parties.

218. That is to say, you admit that you are bound by those agreements till by agreement again you can alter them?—Undoubtedly.

219. I suppose that clause which was put into the North British Company's agreement, that the Railway Company should consent to allow you to have the benefit arising from any contract they had made with another company, was put in to obviate the objection that you had no right to enter as a partner with the Railway Company into a contract which they had made with another party?—No, it was not; it was put in to meet a special clause in the agreement between the Telegraph Company and the North British Company.

220. What was that?—To the effect that the Telegraph Company should not sell or assign its right without the consent of the North British Company.

221. You do not know whether such a clause is in the other agreements?—I do not; I have not yet read the agreements which you have handed in.

222. You have spoken of the telegraph system having grown up in connection with the railway system; I presume it has benefited very largely by the railway system?—Undoubtedly.

223. You would never think of disconnecting it from the railway system, if you could help it?—No, I should propose to extend it from the railway system.

224. You know there is no compulsory power in any Electric Telegraph Company to obtain a footing upon any railways?—Yes.

225. You do not seek any such powers for the Government under this Bill?—No.

226. I suppose you would not think it right to insist upon such powers?—No.

227. At the termination of an agreement which had seven or eight years to run, such as is the case with the London and North Western Company, the Great Northern Company, and some other companies, those companies would be perfectly free, unless you make arrangements with them beforehand to dismiss the Post Office from their lines?—Yes.

228. And that would be an exercise of their rights of property of which you would not complain?—I think we should have no right to complain of it.

229. You would in that case take to the roads?—Failing a satisfactory agreement with them, we should extend our system in some other direction.

230. In fact, you would make a new telegraphic system over the face of the country?—Over the parts where we were dispossessed by the Railway Companies.

231. In dealing with the Telegraph Companies, did not you ascertain what, say upon such a system as the Midland, the London and North Western, the Great Northern, and the Lancashire and Yorkshire, was the length of tenure the companies had?—I was aware that the agreements would expire at various periods.

232. Were you aware that they would expire at very short periods?—I had reason to believe that the London and North Western agreement would expire in seven or eight years.

233. Nevertheless you make your offer to the companies of 20 years' purchase upon the bases of present nett profits?—Yes.

234. Supposing at the end of seven or eight years those Telegraph Companies were dispossessed of their position on those different railways, would their income keep up as now, speaking of it as such profits on a given capital?—Certainly not.

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235. You must then, I think, have calculated upon some permanent arrangement or other with the Railway Companies?—I have never doubted that we could come to a satisfactory agreement with the Railway Companies either now or 20 years hence.

236. Do you think without coming to such a satisfactory agreement you would be able to work your system?—Yes.

237. How?—As you say, we should take to the roads.

238. That is the only alternative?—Yes.

239. And, of course, construct the new works?—Over the parts where we were dispossessed.

240. At present you have nothing south of Carlisle?—No.

241. Unless the South Eastern, and so on, agree with you?—Yes.

242. You have nothing through the whole of the Midland and northern districts of England?—No.

243. Of course the starting of this new system would involve the construction of offices; intermediate offices would be required at various places, I suppose, and a certain amount of care of the wires to protect them from injury, and so forth?—It would not involve the construction of offices; we have the offices.

244. Have you at all estimated the capital that would be required for the construction of new lines, in the event of your not being able to come to arrangements with the Railway Companies?—I have not.

245. It would be a capital not probably inferior to what the companies have spent in the same districts?—I should say it would be inferior.

246. But a very large sum?—A large sum, undoubtedly.

247. During the period the agreement existed you would of course perform all the duties which the Telegraph Companies had bound themselves to the Railway Companies to perform?—Yes.

248. And submit to all the conditions?—We should have no alternative.

249. A part of your scheme, if I understand rightly, is to carry the wires which terminate, say at the station of a railway near a large town, to the post office in the large town itself?—Undoubtedly.

250. Are you aware that many of the agreements provide absolutely for the companies maintaining clerks at those particular stations?—Yes.

251. You would, of course, fulfil that obligation, though your own office would be in the centre of the town?—We would fulfil that obligation if it appeared to be desirable to both parties.

252. That is unless the other party gave up his contract on that point?—Unless the other party came to such an arrangement as that I have read to you in the case of the North British and the Caledonian contracts; that is, unless the companies themselves undertake the transmission of messages at the stations, we paying them a sum to be settled by arbitration for the labour and for their offices.

253. I observe that feature in the North British agreement; you seem to contemplate that the company should be the agents for a good deal of the business?—Only such portion of the business as would continue to be done at the station. There is an analogous arrangement in France and it is a great advantage to the public obviously; it gives them two telegraph stations in the district, and enables those persons who are brought to the railway station by business, or who live near to it, to use it in preference to using the station in the town.

254. That is the arrangement you contemplate making in the case of the North British and the Caledonian Companies?—Yes, and which we have also proposed to the South Eastern Company.

255. I suppose you intend to have extensive workshops, and to be manufacturers and contractors for putting up this electric machinery?—We should do precisely in that respect what the Telegraph Companies have been doing.

256. What have they been doing?—They have had workshops and erected wires, and purchased instruments, and maintained apparatus.

257. So the Government, besides making small arms, will make batteries?—Yes.

258. Are you aware that under some of the agreements you will be obliged to do at cost price all those mechanical matters required for the service of the companies?—Yes.

259. In

259. In your agreement with the Telegraph Companies do you take over the whole of the present workshops?—The whole of their property.

260. And you propose that the Post Office should be manufacturers of wires and electric instruments?—If need be.

261. And you would supply the Railway Companies and keep in repair all their works at cost price?—Unless, as in the case of the North British and the Caledonian, we came to an agreement to do otherwise.

262. I am not speaking of what may be done by agreement; I am speaking of what is to be done if the agreements are not varied?—We propose to fulfil the agreements, unless we can substitute for them agreements more satisfactory to both parties.

263. Would the Railway Companies under the Bill have any power of compelling you to make any terms with them?—I hardly understand the question.

264. You have a clause in the Bill on the subject of Railway Companies, have you not, "The Acts, charters, and grants of any company, whose undertakings shall be sold and conveyed to the Postmaster General under the powers of this Act, shall (except as far as they are by this Act expressed to be varied or repealed, or are inconsistent with the provisions of this Act,) remain in full force, and all matters to be done, continued, or completed, or which, but for the passing of this Act, would, might, or could be done, continued, or completed by the company so selling their undertaking, their officers or servants, shall or may (as the case requires) be done, continued, or completed by the Postmaster General, his officers, and servants;" how is it that you have omitted all mention of agreements there?—I must ask our Counsel to answer that question; my understanding of the Bill is, that we are bound by the obligations of companies whose property we purchase, but whether those clauses express that sufficiently, I am not able to say.

265. You would not object to schedule the contracts to the Bill?—I should not, certainly.

266. Are you aware of the supremacy that many of these agreements give over the officers of the Telegraph Companies to the Railway Companies?—Yes.

267. Power of removal and dismissal, and so on?—Yes.

268. Do you think you would find no difficulty in that respect?—We should, of course, prefer to have the right of dismissing our own people, and to make an arrangement that would make the officers our officers.

269. That is to say, to separate the two staffs?—Yes; that is what we should prefer to do.

270. Do you know the duration of the South Western agreement?—I have not gone into it.

271. Ninety-nine years, I see, from 1865?—Yes; it is a long agreement.

272. Is the Post Office liable for actions for damages for non-delivery of letters?—Will Mr. Ashurst be good enough to answer that question?

Mr. *Ashurst.*] I am afraid not.

273-4. Mr. *Hope Scott.*] You have said so much about responsibility; I want to know whether you are going to stand in the shoes of the companies with regard to actions for damages?—No.

275. You mean to carry into the telegraph business an irresponsibility to actions?—Perhaps that is a question that the learned Counsel had better answer.

276. We have from your solicitor that you are not liable in respect of letters. I ask you, as the propounder of this scheme, whether you intend to carry that protection with your commercial telegraphic business?—My impression is that we should; that we should be no more liable than we are for the non-delivery of letters.

277. You know the companies are liable to actions now?—Yes.

278. Then it resolves into this, I suppose: If by the non-delivery of a telegraphic message any one were to lose a large sum of money, the only thing to do would be to mention it in the House of Commons; is that not so?—I am not prepared to say what ways might be open of obtaining redress; we should not be liable to an action for damages, I imagine.

279. It is clothed in that armour that you propose to enter upon this business?—Yes.

280. You conceive it to be necessary that you should be so protected?—Parliament has considered it necessary that we should be so protected in the case of letters,

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letters, and I know no reason to question the wisdom of Parliament in that respect.

281. When you say that Parliament has so thought fit, can you point to an Act of Parliament which says that there shall be no action brought against the Post Office for non-delivery of letters?—That is a question for the solicitor.

282. The business of the Post Office is an old right of the Crown which you now exercise; but in the Crown there is no right to carry on a telegraphic business, I apprehend. You have not traced in the history of the prerogative the right of the Queen to carry on telegraphic business?—No, certainly, I have not, inasmuch as, when the prerogatives of the Crown were first established, nobody had even dreamt of telegraphy.

283. You are not, I presume, so ignorant of the history of the Post Office as not to be aware that that upon which you rest is a part of the prerogative of the Crown?—I was not aware of it till you mentioned it; I thought it arose out of Acts of Parliament. I will take it from you.

284. You said that you could punish a servant who had been guilty of a violation of secrecy for misdemeanour. Of course, you could dismiss a man who had not properly discharged his duty for non-delivery of a message, but that would be no compensation to the person who had suffered loss by it, would it?— No.

285. Enveloped in this protection, you propose to enter freely into competition with any other bodies who wish to have telegraphic communication themselves?—Yes.

286. That you would call competition upon equal terms, would you; backed by public money, and protected against all actions for damages, you say you would not shrink from competition with other traders in telegraphic communication?—Yes, I do.

287. That amount of courage is derived a good deal from the circumstances under which you would start?—Undoubtedly.

288. You do not want a legal monopoly under those circumstances, you say?—No: I told you we should have a practical monopoly.

289. You said by the superior way in which you did your business; you did not say anything about public monies or exemptions from actions?—I say again that we should maintain a monopoly by the superior way in which we should do the business, because the instant we failed to do it, probably Parliament would either take it out of our hands or enable somebody else to carry it on; that is the counter-protection to the public.

290. At present I think, unless I am mistaken, you rather do rely upon the law to protect you from competition; where circulars are sent about by private companies, you are down upon them at once, are not you?—Scarcely at once.

291. The second time?—No, nor the hundredth.

292. However, the superior way of doing your postal business does not render it necessary for you to prosecute people who compete with you?—We are bound, as long as the law exists, to carry out that law.

293. And it is under an imperative sense of duty that you have been prosecuting people who have sent circulars round for a halfpenny?—Yes; and under the advice of the law officers of the Crown.

294. And if competition in the telegraph business came to be at all inconvenient, probably that is a kind of protection you would wish also?—No; I never should wish for that protection.

295. And you regret to see those prosecutions?—No; I do not regret them, but I should not be sorry certainly, if we had no legal monopoly of letters at present.

296. With responsibility of course for damage?—No; I do not wish to be responsible for damages.

297. You and the railways come in contact pretty often, do not you, now?—Not very often; we are in tolerably good working with them.

298. You have taken a good deal of their business from them in small parcels?—I am not aware of that.

299. How about the book post?—I do not think that we have taken anything from them.

300. If I want to send three or four reviews that come out quarterly, I can send them all by the post, cannot I?—Yes.

301. What

301. What did I do before you began your book post business?—You did not send them at all.

302. Do you mean to say that the "Quarterly Review" never got to Edinburgh?—The reviews and such publications went in large parcels undoubtedly, but not to the extent they do now; I do not mean to say that there was no trade, but I say that the trade we have got, is a trade which we have created.

303. Have you turned at all into money what the price will be that you are going to give the Electric Telegraph Company; you are to give 20 years' purchase of its present nett profits?—I should be sorry to do the work of the arbitrator in that respect; it is for him to say what the present nett profits are. They are to have 20 years' purchase of the nett profits.

304. Nett profits being gross profits, less working expenses?—Yes.

305. You have formed no calculation at all?—No, I do not say that.

306. You have an idea of what you are buying?—Yes.

307. Does it agree with your own published estimates?—With which of them?

308. With the highest of them?—I should imagine that it would not differ very materially from the highest of them, but that has not been published.

309. I referred to your published estimates?—I do not doubt that it will differ from the highest of them.

310. It will be considerably in excess of the highest of them, will it not?—Not very considerably.

311. The published estimate I do not think contains anything for the Railway Companies' compensation?—It does not.

312. The North British Railway Company are to get 50,000 *l.*?—Subject to the verification of their figures. I wish to make this remark, that whatever alteration my estimate may undergo on one side of the account, in consequence of our buying the trade of the North British Railway Company, it will have to undergo a corresponding alteration on the other side, in consequence of our getting a trade not taken into consideration in our estimated revenue.

313. Your estimate applies only to Telegraph Companies proper?—Exclusively.

314. This is an additional trade of 2,500 *l.* a year of the North British Railway Company, which you are going to buy; and, talking of competition, you shut them up by your agreement; you do not allow them to do any commercial business?—After buying their right, we could hardly give it back to them again.

315. You might have left it alone?—We were willing to have left them and not to have bought them.

316. They would not take that view?—No, they preferred the view which is expressed in the agreement.

317. The future profit is a matter for arbitration?—Yes.

318. The loss of way-leaves is a matter for arbitration?—Yes.

319. And some six or eight heads of the Caledonian agreement are also to be matters of arbitration?—Yes.

320. All representing money, and in money to a considerable extent?—No, I should think not.

321. I did not quite understand what the additional advantages to be given to the United Kingdom Company were besides their getting their 20 years' purchase of their present nett receipts; there were one or two pluses, what were those pluses?—Their present nett profits simply pay the dividends on their preference shares and their debentures.

Chairman.] Does this affect the interests of the parties you represent?

Mr. *Hope Scott.*] I am interested in this to see whether there will be any money left to pay me.

Chairman.] This is a question which the Committee will have to go into, but the question is whether it comes within the instruction that the opponents are only to be heard against such of the matters as affect their particular interests.

Mr. *Hope Scott.*] Another point of view in which we look at it is this: if this matter is not conducted on a sound commercial footing the result will

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be this, that everything will be done to make it agreeable to the public, and endeavours will be made to get out of the Railway Companies that which would make up for the public deficit. We know pretty well that the Post Office looks very sharply into all matters connected with the railways; we know how they come down upon us if we attach a truck to the limited mail. Unless they enter upon this business with really sound commercial principles at the bottom of it, and make it self-supporting, we should be in a constant struggle with the Post Office. With the Telegraph Companies we deal on equal terms; they are commercial companies dependent upon us, and we are commercial companies to a certain extent depending upon them; but if we substitute Mr. Scudamore with all his protection for those companies and no responsibilities, we shall have to deal, not only with a very much more powerful party, but with a party who, if they get into pecuniary difficulties, will be sure to punish us among the very first. We have a distinct interest in this commercial matters being on a commercial basis, that is one of the reasons why I am inquiring into this question of price. At the same time a great deal of this is speculative, so that I am willing to leave that as it is, and I will turn to another subject, the privacy of telegraph communication.

322. (To the *Witness.*) I suppose you will run telegraphic wires to all the Government offices, will you not?—I have not considered that question at all. If it were desirable, no doubt we should.

323. Do not you think you would do it as a matter of course?—I have not considered the question at all.

324. I will put it in this way; suppose you were to run a telegraph wire to the office of the Chancellor of the Exchequer (I am speaking of an abstract Chancellor of the Exchequer), suppose an indiscreet Chancellor of the Exchequer, he might by a clerk read every message that passed over the whole system, might he not?—I decline to suppose an indiscreet Chancellor of the Exchequer.

325. Then let us take the First Lord of the Treasury?—I must decline to suppose an indiscreet First Lord of the Treasury.

326. Suppose it goes into the office of the porter at the Treasury, would not that porter have the opportunity of reading every message sent over the whole wire?—If he were the receiver of the message he would.

327. No; may he not, at a properly constructed instrument connected with the main system, read every message that passes over that system?—I do not quite understand the drift of your question.

328. As a matter of fact, cannot a party in possession of a proper instrument at any point upon an electric telegraph system, read all the messages that go by that system?—I am not aware that he can; whatever can be done now can be done hereafter.

Mr. *Sargood.*] Unless you put a stop to it.

329. Mr. *Hope Scott.*] You do not know how that was done in America during the war?—I have read accounts of it.

330. Do you mean that you did not know that fact?—It had not occurred to me at all.

331. Your answer to me upon this subject indicates that you at all events have not studied the working of the telegraph system very carefully?—I have not studied the engineering of telegraphy. I have no knowledge whatever upon this subject.

332. You propose to take over the staffs of the existing companies?—Yes.

333. And must for a considerable number of years depend upon them, I suppose?—Upon them, and such other scientific aid as we can obtain.

334. So that the benefit of this change of system will not arise from any amendment of the practical working of the telegraphs as far as intelligence and skill goes for some time to come?—It certainly will not arise from any special knowledge on my part of telegraphy.

335. Is there anybody at the Post Office who has that special knowledge?—I am not aware that there is.

336. So you have not proposed to any chairman of the existing Telegraph Companies to have a seat at the Post Office?—No, nor do we intend.

Re-examined

Re-examined by Mr. *Sargood.*

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337. You have been asked as to the prospective difficulties in arranging with the Railway Companies, had it entered into your mind that there was likely to be anything like a general conspiracy to defeat your Bill?—No, I could not suppose public companies to be so devoid of public spirit.

338. You would not do them the injustice of imagining such a thing?—No, I had always considered that they merely wished to obtain fair and proper terms for themselves.

339. Upon that basis you were perfectly ready to treat with them?—Yes.

340. You have been asked about having to prosecute people for carrying on the business of letter carriers?—Yes.

341. And I dare say it has been within your knowledge, or within your means of information, that Railway Companies have prosecuted people for carrying small parcels?—I cannot say that I have heard of that.

The Committee deliberated.

Chairman.] The Committee have been considering whether they should put certain questions to the witness now, or reserve them for a future time, and they have determined to reserve them.

[The Witness withdrew.

George Harrison, Esq., called in; and Examined by Mr. *Wheeler.*

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342. Are you a Merchant at Edinburgh?—Yes.

343. And Chairman of the Edinburgh Chamber of Commerce?—I am.

344. I believe that some years before you were chairman you were secretary?—I was, for five years, before I became deputy chairman; for three years I was deputy chairman, and since then, for two years, I have been chairman.

345. I believe for some years you have given great attention to the subject of telegraphy?—I have had occasion, during the last three years, to pay considerable attention to it.

346. And the desirability of transferring to the Government the telegraphic communication of the country?—Yes.

347. Three years ago did the United Kingdom Telegraph Company enter into an arrangement with other Telegraph Companies to increase their rate?—Yes, and the consequence of that was, that there were a great many complaints made to the Chamber of Commerce that the work, while being more costly to the public, was actually worse done; and the result of that, I may say, was, that in July 1865 the Chamber of Commerce appointed a committee for the purpose of considering the question. I was appointed convener of that committee, and it had repeated meetings, and finally it reported to the Chamber in October; that report has, I observe, been printed in the Blue Book which has been issued at pages 51 to 54.

348. In March 1865 did you instruct the secretary of an institution at Edinburgh to write to the Electric Telegraph Company on the subject of the inaccuracy of their messages?—I am a director, likewise, of a philosophical institution of Edinburgh, which, among other parts of the institution, has a reading-room. I may state that there are 2,600 members of that institution, and shortly after the raising of the charges by those Telegraph Companies there was a considerable amount of correspondence on the part of the secretary with the Secretary of the Electric Telegraph Company. The directors of the philosophical institution had occasion to state that the business was being very badly done, and that, while they had been promised that by the new arrangement, which led to an increase of charge, the work would be better done, the fact was it was worse done.

349. I believe you produced a letter from the Secretary of the Philosophical Institution to the Electric Telegraph Company?—I did, and I gave it simply as one illustration of the many kinds of complaint that came before the Directors of the Chamber of Commerce upon the subject.

350. Will you tell us in your own way what led to the Chamber of Commerce taking action in this matter?—The members themselves complained that while

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the charges had been increased, the work of the Telegraph Company was worse done. Most of the members of the Chamber of Commerce are commercial men, and in the habit of using the telegraph to a considerable extent, and they were naturally displeased to find an increase of charge, and still more displeased when they found that there was greater carelessness in carrying on the business than there had been previously.

351. In the month of July, 1865, I believe you moved the Chamber of Commerce to appoint a Committee to consider the condition of telegraphic communication in Great Britain with a view to its improvement?—Yes.

352. The Report of the Committee is published in the Blue Book?—It is at page 51.

353. Were the recommendations contained in that Report adopted by the Chambers of Commerce throughout the kingdom?—They were adopted in the first place unanimously by the Edinburgh Chamber of Commerce, and a short time afterwards at an associated meeting of Chambers of Commerce, of which the Edinburgh Chamber of Commerce was not one, but which at that time comprised 29 Chambers of Commerce, the Report was unanimously adopted, and it was subsequently adopted by, I think, nearly every Chamber of Commerce in the kingdom, and its conclusions were adopted likewise by other commercial bodies, including, I may say, the Merchant Company of Edinburgh, which is a very much older corporation than any of the Chambers of Commerce in the kingdom, and very generally by the town councils, of Scotland, at any rate.

354. I believe in the year 1865 the Chamber of Commerce memorialised the Government to appoint a Royal Commission?—It did.

355. That was in 1865. In 1867, I believe, they petitioned Parliament?—Yes; I may state that in the Session following that in which the Chamber of Commerce published its Report, they were informed in answer to some inquiries which they made, through the medium of some Member of the House of Commons, that the Government did not consider it necessary to appoint a Royal Commission; that they had obtained, or were in the course of obtaining, all the information that was necessary upon the subject. The Chambers of Commerce were in hopes that in the next Session of Parliament a Bill might have been introduced upon the subject, but the time of Parliament, as I understand, was very much occupied by the Reform Bill, and the subsequent change of Ministry prevented any measure being at that time brought forward.

356. There was a Petition presented to Parliament in January 1867, and a further Petition in the present Session?—There was.

357. I believe you are in a position to say that it is the desire of the Chambers of Commerce throughout the kingdom that the Government should undertake the telegraphic communication of the country?—So far as I have been able to learn, it is the unanimous desire of every Chamber of Commerce in the kingdom.

358-9. Passing to Scotland, of your own knowledge is the telegraphic communication throughout Scotland sufficient for the requirements of the public?—I do not think it is.

360. And it is desirable, in your opinion, that there should be greater facility for telegraphic communication?—Decidedly.

361. Can you mention any important districts or towns in Scotland that are at present wholly without telegraphic communication?—In the Report which was published by the Chamber of Commerce in 1865, we instanced four places: Wick, St. Andrew's, Leven, and Thurso. Three years have elapsed since then, and I believe those four places are still unsupplied with telegraphic communication, except that within, perhaps, the last two or three days the North British Railway Company has extended its communication to Leven; but the Telegraph Companies have done nothing.

362. Are those towns important ones; is their population large?—The parish of Wick has a population of about 13,000; the town has a population of about 7,000. It is the seat of the largest herring fishery, I believe, in the world, and I think that Telegraph Companies usually say that telegraphic communication is very important where there is a commerce of a fluctuating kind, and where the value of the article is liable to change rapidly. Now, Wick is the centre of a trade of that kind, and yet it has no telegraphic communication. Notwithstanding this Report of the Chamber of Commerce pointed that out three years ago, nothing has been done to supply that want. Thurso is a considerable town, a town of 3,000 inhabitants or thereabouts, with a very considerable trade. St. Andrews,

Andrew's, within 40 miles of Edinburgh, is the seat of the University; it has a population of between 5,000 and 6,000, a large middle and higher class population, and one would suppose that it would have been one of the first places to which telegraphic communication would have been extended. Leven, within about 20 miles of Edinburgh, has likewise a considerable trade and population. I mention those because they were places mentioned in our Report at that time, and they are still without communication.

363. Let me direct your attention to another matter; from your knowledge, as a general merchant, do you think small country tradesmen would avail themselves of telegraphic communication if it were extended as proposed under this Bill?—I have no doubt of it whatever. In connection with my own business, which is that of a Tweed merchant, I know that it is a very great advantage to our customers to be able to communicate rapidly; it enables them to keep their stocks small, and prevents the risk of bad stock to a very great extent, and even at the higher rates of cost at present it is used to a great extent by small dealers.

364. I believe you are well acquainted with Edinburgh itself; you tell us that in Edinburgh there are three Telegraph Companies' offices?—The three Telegraph Companies have all offices in Edinburgh; their principal offices are situated within two or three doors of each other.

365. And in the same street?—Two of them are in the same street, and the third is at the corner of the same street, but I think the entrance is from the adjoining street.

366. If the intention of the Post Office be carried out, do you think that the making of every money-order office a Telegraph Office would be desirable?—I am quite certain that it would be a very great improvement; one-half of the city of Edinburgh is situated south of a line which has no Telegraph Office whatever, and that half of Edinburgh contains very many important business establishments, and likewise contains the residences of nearly all the merchants and shopkeepers.

367. Have you reason to believe that if a large number of those offices were made into Telegraph Offices the supply would be about equal to the demand?—I have no doubt of it.

368. As to that about which the Committee have heard so much, namely, secrecy, have you any fear that the Government officials would divulge secrets sent by the Telegraph?—None whatever. I may state that in the Report which the Chamber of Commerce issued three years ago, it was distinctly stated that the Chamber of Commerce of Edinburgh had no such fears; that Report was sent to all the Chambers of Commerce in the kingdom, and it was adopted by all those Chambers of Commerce. It is evident from that, I think, that the commercial public generally do not anticipate any danger from such a quarter.

369. As to a further point, what is the general public opinion in Scotland as to the control of the telegraph, supposing it were placed in the hands of the Government?—Perhaps the best indication of that opinion that I can give in a few words is, to state that in Edinburgh in the month of April the Convention of Royal Burghs met; that convocation representing, I think, about 60 Royal Burghs in Scotland, comprising all the large cities, and that that body unanimously adopted a Petition to Parliament praying that the Government Telegraph Bill might be passed.

370. As to a point suggested by Mr. Hope Scott in his cross-examination of Mr. Scudamore, he put it to Mr. Scudamore that the Government would be exempt from the ordinary liability for negligence in the transmission of messages; do you not know that at the present time the Electric Telegraph Companies enjoy perfect immunity or almost perfect immunity from action?—I believe they do.

371. The reason being that they carry messages under such stringent contracts that redress, if a grievance occurred, is practically hopeless?—I have heard of many complaints, but I have not heard that any merchant or other person has raised an action against the Telegraph Companies.

372. I have in my hand the contract note or message paper of the Electric and International Telegraph Company. I see upon the back of that, "Conditions as to the Liability of the Company." Will you read this to the Committee?—"Conditions as to the liability of the company. The following are the conditions as to the liability of the company, subject to which the agreement is made between the sender of the message and the company, and which are referred to on the other side of this paper as the endorsed conditions.

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conditions. The company will not be responsible for inaccuracy in the transmission of any message along the company's lines unless the message be an insured message, in which latter case the company will be responsible to the extent only of the sum for which the message is insured, at the rate paid for such insurance. The company will not be responsible, beyond the sum of 5 *l.*, for the non-transmission, loss, or non-delivery of any message, whether the message be insured or not. The company will not be responsible to any extent whatever for any delay in the transmission or delivery of any message, whether the message be insured or not. The company will not be responsible in any case for interruptions to the working of their telegraphs. Messages to be sent to any place beyond the extent of the company's lines or stations will be delivered by the company's officers at their terminal station, mentioned in the request on the other side of this paper, to such persons as may have charge of the further means of conveyance, but the company will in no case be responsible for the acts or defaults of other companies or persons not in their employ, nor for inaccuracy in transmission of the message, nor for any other consequences whatsoever arising from such acts or defaults, whether the message be insured or not. Porterage, payable by the sender of a message, is charged in ordinary cases at the rate of 6 *d.* per mile per foot delivery, and 1 *s.* per mile for special delivery, no charge being made for delivery within half a mile."

373. That is the message paper on which the sender of the telegram writes his message?—Yes.

374. And therefore he accepts those conditions?—Yes.

375. This is the contract-note of the British and Irish Magnetic Telegraph Company, in connection with the Submarine Telegraph Company, will you read that; you will find the conditions at the bottom of the page?—"The above companies respectively will not be responsible for mistakes or delays in the transmissions of, nor for the non-delivery of, unrepeated messages from whatever cause arising. Nor will the above companies respectively be responsible for mistakes or delay in the transmission of, nor for the non-delivery of, a repeated message to any extent above 5 *l.*, unless it be insured at the rate of 1 *l.* per cent., and they will not be liable to any extent beyond the amount insured and for which such rate is paid; nor will they respectively be in any case responsible for anything done, or omitted to be done, beyond the limits of the telegraphs belonging to the said two companies. No message that is unintelligible can be transmitted to the Continent of Europe, in consequence of the regulations of foreign governments; and these companies respectively reserve to themselves the right of refusing to forward any message which in their opinion contains anything unintelligible."

376. Will you read the conditions of the British and Irish Magnetic Telegraphic Company, in connection with the Submarine and London District Telegraph Companies?—"The company will not be responsible for mistakes in the transmission of unrepeated messages, from whatever cause arising. Nor will the company be responsible for mistakes in the transmission of a repeated message, nor for delay in the transmission or delivery, nor for the non-transmission or non-delivery, of any message, whether repeated or unrepeated, to any extent above 5 *l.*, unless it be insured at the rate of 1 *l.* per cent. Notice.—It is expressly provided that the company cannot insure or undertake any liability with regard to the transmission of messages to the Continent of Europe, or elsewhere beyond the extent of their own lines."

Cross-examined by Mr. *Denison*.

377. What did you say your occupation is?—A Tweed Merchant.

378. I am no longer concerned in defending the Telegraph Companies, but I must ask you a question or two bearing on the Railway Companies' interests. You said that the beginning of the complaint was that the United Kingdom Telegraph Company agreed with the other company to raise its rate?—Yes.

379. Upon what basis did the United Kingdom Telegraph Company begin business?—Practically they began business with a uniform 1 *s.* rate, but I believe they had Parliamentary power to charge 1 *s.* 6 *d.* beyond 100 miles, and 2 *s.* beyond 200 miles.

380. Do you know that when that Bill was got they were told by their opponents that they could never work the thing at a uniform 1 *s.* rate?—I believe they were so told.

381. And

381. And it so turned out?—It is possible that it may have turned out so, so far as they are concerned; and I think, in the Report which we issued, we did not complain of the United Kingdom Telegraph Company, but rather acknowledged that the public had derived some advantage from them.

382. The result was that they could not go on on the uniform shilling basis?—The reason being, as we stated, that their wires were extended to comparatively few places, that the old companies immediately reduced their rates to the 1 *s.* rate to those few places, keeping up the rates (and so enabling them to compete with or ruin the United Kingdom Telegraph Company) to those places to which the United Kingdom Telegraph Company had no communication.

383. The action began from the verifications of the predictions made by the old company that a uniform 1 *s.* rate would not pay?—Under the circumstances to which I have alluded.

384. The intention of the Promoters of this Bill appears to be, according to the agreements that have been handed in, to buy the existing Telegraph Companies upon a certain number of years' purchase of their profits?—Yes.

385. To give them full value?—Yes.

386. Do you apprehend then that the Post Office will be able to carry on the business at a profit, considering what they have to pay for buying up the companies?—I have no doubt of it.

387. On what ground do you put that?—Because I believe the simplicity of the arrangements and the uniform rate, and that uniform rate being lower than the present rates, will lead to a very large extension of business.

Chairman.] Are you cross-examining for the Railway Companies?

Mr. *Denison.*] Yes.

Chairman.] How do you bring this in as affecting your company?

Mr. *Denison.*] I thought it had been settled that we were to go into a general examination of the case.

Mr. *Sargood.*] No, I understood it was settled the contrary way; I have been very anxious not to appear to shut out inquiry.

Mr. *Denison.*] The Railway Companies are opposing this Bill, and the opponents of the Bill have certainly a right to point out to the Committee on a Bill every ground of objection.

Chairman.] When the reference is the usual reference, but on this occasion it is not.

Mr. *Denison.*] Have the Committee decided that the Railway Companies are to oppose this Bill with their hands tied and mouths shut?

Chairman.] I announced that the Committee had come to a determination that the parties opposing the Bill would not be able to oppose generally, but only on those matters affecting their particular interests, in accordance with the instruction. This is a matter which we shall go into.

Mr. *Denison.*] That, as I understand, arises upon the instructions; but the first thing you have to do is to pass the Preamble. The Railway Companies are entirely opposed to the Preamble; they believe that as things stand at present the scheme will be entirely injurious.

Chairman.] You were not in the room yesterday?

Mr. *Denison.*] No.

Chairman.] We referred to the proceedings of the House of Commons, and we found that there was a distinct amendment proposed by an Honourable Member, that the words "Preamble and Clauses" should be inserted instead of "those matters affecting their particular interests." That amendment was negatived in the House of Commons.

Mr. *Denison.*] The instruction is this, "To hear such Telegraph and Railway Companies and proprietors as shall by petition, on or before the 26th instant, have prayed to be heard by themselves, their counsel, or agents, against such of the matters referred to the Committee as affect their

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particular interests." Our impression is, that the whole of this question affects our particular interests. Our interest is to keep the telegraphs in our hands, not to have to deal with the Postmaster General instead of the Telegraph Companies. I am trying to lay a foundation for that argument which would be laid by some of us hereafter; it would be impossible for us to oppose the Bill unless we are allowed to ask the questions which enable us to lay the necessary arguments before you.

388. (To the *Witness.*) At present you know there are arrangements between the Railway Companies and the Telegraph Companies of various kinds for carrying on the business such as has been described; what security do you think the Railway Companies would have against the Post Office for that work being done by them in a satisfactory way?

Witness.] It seems a matter of detail, on which my opinion, I should suppose, would be of very little value. No doubt such arrangements might be easily made as should protect the public interest and the railway interest.

389. When you signed those Petitions and made those Reports, and so on, did you know of the arrangements between the Railway Companies and the Telegraph Companies?—I am not sure that we did; the truth is, that we found such a unanimous concurrence of opinion on the part of the whole commercial public, that very possibly we did not go so minutely into the details as we should have done if there had been any opposition. We should have been delighted to have had opposition, because we should have inquired further into the matter.

390. You know that you never considered the railway question at all?—We did not, I believe, suppose at the time that it affected the public interests much in the matter.

391. And you had not at that time seen any of the agreements?—No; but as a railway director, I have seen such agreements since, and I am not aware that there is anything in those agreements which may not be regulated in the public interest, or which should render the passing of such a Bill adverse to the public interest.

392. Which Company are you a director of?—Of the North British.

393. As a shareholder in the North British Company I agree with you, but that is a very different question. You have spoken of having presented those Petitions, and you referred us to some pages in the Blue Book. The Petition was not a Petition for the purchase of the telegraphs by the Government in the first instance, was it?—No.

394. All that you then aimed at was a reduction of rates?—I think that we aimed at something more than that; we asked for a Royal Commission of inquiry for the purpose of ascertaining, as we wished, what would be the best mode of conducting this telegraphic communication in the interest of the public; and I may mention that, in that Report, we indicated three different modes by which a better system than the system then existing might be arranged.

395. I asked a question which admits of an easy answer; I did not ask for all that speech. I asked you whether your first Petition was not directed to obtaining lower rates?—Our first Petition was for the purpose of obtaining a Royal Commission to inquire into the whole question, not merely as regards lower rates, but as to more complete communication, and as to insuring greater accuracy.

396. What you recommended with the view of getting lower rates was the amalgamation of the existing companies, was that not it; at page 53 of the Blue Book you say, "One method suggesting itself is the amalgamation of the three existing Companies, under the sanction of an Act of Parliament, which might fix the maximum rate or rates and the maximum tariff chargeable"?—That is one mode. Another was perfectly free trade by the passing of a general Act, which would enable any parties to put poles upon the high roads, and we pointed out that it would be still more desirable if the Railway Companies would give similar advantages to any parties; that was the second mode. The third mode was Government management, and of all those three modes we considered at that time that the third would be the most effective.

397. The representation concludes, "Your Committee will not in the meantime ask the Chamber to give its adhesion to any one of those three proposed plans

plans of improvement, feeling that the question is one of such importance that these and all other suggestions which may be made ought to be thoroughly sifted" ?—That was our conclusion at that time.

398. You are of opinion evidently that there is a better chance of the telegraphs being extended in the hands of the Government than if they remained in the hands of the Railway Companies ?—Yes.

399. You do not expect that the Government is to have any regard apparently to the profitableness of the working of the telegraph at any particular place ?—Our opinion and my own opinion is that, without rendering the business unprofitable, the Government would be able gradually and much more rapidly than the Telegraph Companies have done to extend the communication.

400. Why much more rapidly than the Telegraph Companies, if they buy up the Telegraph Companies at their full value ?—As I stated, the Edinburgh Chamber of Commerce, and I believe all the Chambers of Commerce in the kingdom, believe that the business would extend rapidly.

401. You have spoken also about insured messages, and you have complained, I think, of 5 *l.* being the maximum for which any compensation may be given. What security or what promise have you that you can get from the Government even 5 *l.* compensation for mis-sending a message ?—I believe that if the Government acted unfairly towards the public, the public would have, through the medium of the public press, through the medium of Parliament, and through the medium of public opinion, the means of compelling the Government to act reasonably.

402. The Government have been carrying letters for a good while ?—Yes.

403. Did you ever hear of anybody getting 2 *d.* out of them by the action of the press, or by the pressure of Parliament ?—So far as my experience of the Government's carrying letters is concerned, I have only to say that I have always found the Government much more careful of my letters than I was myself; and that neither in my own person, nor in the person of any other of my commercial friends, have I ever heard of any complaint of loss sustained through any carelessness on the part of the Government.

404. Do you say that you have never heard of such a thing as the loss of a letter upon the part of the Government ?—I say that in our Chamber of Commerce there has never been a complaint on the part of any one of the members; had there been I should have known of it.

405. Did you ever hear of anybody getting 2 *d.* out of the Government by the action of the press or by the pressure of Parliament ?—I never heard of anybody seeking 2 *d.*; I cannot answer the question.

406. An insured message by telegraph may be considered as parallel to a registered letter, may it not ?—I should think so.

407. Do people get compensation if registered letters are lost ?—I cannot say, for the reason which I have mentioned; no such losses have ever come within the course of my knowledge in any such cases.

408. Have you any kind of security, or promise of any description, for telegraphs being extended to those small places which you mentioned, namely, Wick, and Thurso, and Leven ?—We scarcely consider Wick a small place.

409. Call them large places, if you like; at present the railway has not reached Wick ?—No.

410. The telegraph has gone along with the railway as far as it has been constructed ?—I believe that it has, but that is no reason why it should not go further.

411. How far has the railway gone ?—To Golspie.

412. How far is that from Wick ?—About 60 miles.

413. And it is progressing ?—Yes, slowly.

414. Do I understand you to say that the Telegraph Companies are not liable at all unless the message is insured; not even to the amount of 5 *l.* ?—Practically, I believe that they are really not liable.

415. That implies something behind ?—I believe that from the difficulties in the way of obtaining compensation, no one thinks of trying to get it.

416. You do not say that there is any legal exemption from liability for an uninsured message ?—I do not know that there is.

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Re-examined by Mr. *Sargood*.

417. My learned friend asked you about your object being a reduction of rates; I see that the three things which you set out are these: "First, the high charges for the transmission of messages; second, the frequent and vexatious delays in their delivery, and their inaccurate rendering; third, that many important towns, and even whole districts, are unsupplied with telegraphic communication." Those are some of the material grounds of dissatisfaction?—Yes.

418. Do you believe that the increase would be very great if the rates were reduced?—I have no doubt of it.

419. At page 53, you say that one means "of obtaining cheap and universal telegraphic communication would be for the Government to assume its management, and to extend the lines so that they may at least include all those places, say about 3,000 in number, in which there are at present money-order offices." In your judgment, and in the judgment of the Chambers of Commerce with which you are familiar, is that a thing to be desired?—I think that it is; and I believe not merely the Chambers of Commerce, but the whole public, at any rate in Scotland, are decidedly and strongly of that opinion.

420. Do you believe that that desideratum is more likely to be obtained if the telegraphs are in the hands of the Government than otherwise?—I have no doubt whatever of it.

421. There is another paragraph here which my learned friend Mr. Denison passed by when he began to read from the words "Your Committee," which I will just read. "The time has passed when every action of Government was looked upon with suspicion. It is now admitted to be an organisation capable of the most valuable uses; its members are not suspected of speculation in stocks or produce; and its servants are believed to be as trustworthy as those of any great public company or association. The public would implicitly trust its messages as well as its letters to them." Whatever may be the ideas of Railway Companies, as represented by my learned friends, are those which I have read the ideas of the commercial community, so far as you can understand them?—Those ideas were adopted, in the first place, by the Edinburgh Chamber of Commerce; they were immediately afterwards adopted by the Associated Chambers of Commerce, and they have since, I believe, been adopted by all, or nearly every Chamber of Commerce in the kingdom, and I think that they are the views of the commercial community generally.

422. A word about the company whose Bill my learned friend assisted in getting, and that 1 *s.* rate; you say that it is within your memory that the opposing company prophesied to them that the 1 *s.* rate would not answer their purpose?—I think I have heard so; I may state that a good many members of the Edinburgh Chamber of Commerce became shareholders in the United Kingdom Company, simply for the purpose of improving telegraphic communication.

423. Is it within your knowledge and recollection that the rival company endeavoured to illustrate its own theory, by practising 1 *s.* rates itself wherever the new company had the chance of going?—Yes.

424. And abstaining from it in every other direction?—Yes.

425. They aided then in realising their own prophecy?—They did; I may state that on the 4th of August, the chairman of the Electric and International Company said that up to that time their tariff was quite full of injustice; that is to say, charging 1 *s.* to one town, and 3 *s.* to another not six miles distant from it, and the same for 50 miles as for 100 miles; and that injustice apparently was perpetrated for the purpose of realising their prophecies concerning the United Kingdom Company.

426. And running it off its own line?—Yes.

427. And they succeeded in driving the other company into a change of its tariff by that means?—Yes.

428. That is not exactly what you would call making a fair experiment of a 1 *s.* rate?—I do not think it is.

429. Mr.

429. Mr. *Goschen.*] Do I understand you rightly, that you petitioned in favour of the Bill, or in favour of the principle?—We have petitioned in favour of the Bill repeatedly.

430. Have you read the Bill?—Yes.

431. I see, in the second clause, it incorporates the clauses of the Telegraph Act; have you looked to see what clauses those are which are incorporated?—I think that I did so at the time, but I do not remember them specifically.

432. Are you aware whether there is anything in the Bill, or not, to compel the Government to give the public a certain amount of accommodation?—I am not aware that there is.

433. So that it will depend upon the action of the Government whether sufficient accommodation is given to the public?—The Chambers of Commerce trusted very much to Parliament taking care that that was done.

434. Supposing that, owing to the amount to be given in the Telegraph companies, a 1 *s.* rate would not cover the expenses; what would be the view of the commercial community which has petitioned in favour of this Bill; would they rather have a loss to the country or an increase of the rate?—I do not think that the commercial community would wish any loss to the country; I think they would prefer that the thing should be made to pay itself.

435. There are two ways of making it pay itself, by raising the rate or by decreasing the accommodation?—I think, in our Petition or in our Report, we indicated that it might be a fair thing for the Government to give this a fair trial, not such a trial as the United Kingdom Company was able to give it, and to risk some little at first in order to give it a fair trial, in order to see that the increase which we anticipate was really realised.

436. Are you prepared, if it does not pay at 1 *s.*, to pay 1 *s.* 6 *d.*?—After a fair trial, decidedly.

437. Then you might come to this point, that the rates would be higher under the Government system than they were before?—We do not anticipate that, but if, after a trial of the experiment in connection with the Post Office, such a thing should happen, I think the commercial community would consider the Government justified in raising the rates.

438. Are you in favour of a uniform rate?—Decidedly.

439. A uniform rate is the basis of the plan?—Yes.

440. May not the result, then, be this, that the commercial community in the large places may have to pay a higher rate for their messages, in order to supply the small villages and outlying districts?—The commercial community anticipate that a very much lower rate than the 1 *s.* rate will ultimately be found sufficient; they anticipate that 6 *d.* will be ultimately found sufficient, but they are prepared to pay a higher rate, in order that the experiment may be tried without much risk of loss to the community; they are prepared, I believe, to pay a higher rate in the large towns, in order that the system may be complete, because, as we understand, the system is not complete if it merely provides that Liverpool shall communicate with London, but it is desirable that Liverpool should be able to communicate with Wick; there may be a loss in carrying on an agency at Wick.

441. What will be the result if the experiment does not succeed; what action could Parliament take?—They could direct the rates to be raised. I understand that Parliament is omnipotent in all such matters.

442. You would have to go back to higher rates?—The thing is possible, but very improbable.

443. It would depend upon the price to be paid originally?—To some extent.

444. Are you aware what that price is?—I have heard in evidence the price stated.

445. But you had not heard it when the Petition was sent?—No.

446. At that time also it was supposed that the experiment would succeed?—It was.

447. What I want to get at is this: do you consider that there is any risk in making the experiment, for if the experiment does not succeed you cannot undo it again?—I do not think there is any risk in making the experiment; but if it did

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did not succeed, which, I believe, in the opinion of the commercial body is extremely unlikely, Parliament would and could raise the rates.

448. The result would be that the scheme would have been carried out, and the rates would have been raised?—It seems a most remote contingency and a most unlikely one, but I allow the possibility of anything.

449. Have you deliberately faced this question, that the Telegraph Companies can never be brought back again if the thing does not succeed?—We have scarcely considered that; it was an idea so remote from us that we did not think it worth considering.

450. In fact, you consider the risk so slight that you were willing to incur it?—Quite so.

451. Did you consider that the risk would be that you could never change the system back again without an enormous loss of money?—We are not in the habit of considering the amount of money involved when there is an enormous good to the country such as this is; and, indeed, one reason why the Chambers of Commerce have pressed the matter, and have so urgently pressed it during the last three years, was that they considered that the whole system was in its infancy, and that that is practicable now which might not be practicable without very great risk some years hence. In fact, we estimated three years ago that the cost to the State would be considerably less than I believe it would be now. We have urgently pressed it, and pressed it again and again upon the Government, solely upon the ground that every day, every month, and every year that was passing was rendering it a more costly experiment for the Government to undertake.

452. Have you considered the question of whether the Government is likely to adopt new inventions, to give as fair a trial to every new mode of telegraphy as a private company?—I think that on the whole they are more likely to adopt new inventions than the Telegraph Companies are.

453. The Telegraph Companies would act under the stimulus of competition, would they not?—Yes; but the Telegraph Companies have property which they have spent money upon and which might be rendered valueless by instruments, and that to the shareholders of the Telegraph Companies is rather a serious matter and might prevent the directors from making a trial of those new instruments.

454. Have you not heard that the Telegraph Companies have been very ready to try new and more economical methods?—I have heard that they are very far from ready; but I do not think that my opinion is of any value whatever, as I do not profess to have any practical knowledge of telegraphy.

455. You would rely upon the Government giving a fair trial to all new inventions?—I think that upon the whole they would be much more likely than the Telegraph Companies to give a fair trial to any new inventions.

456. At present the Telegraph Companies are exposed to the risk of finding, some fine day, an invention which will make their property valueless?—Yes.

457. And that property which we are going to buy now is at the highest value that it has ever been?—I do not think myself able to go into the value of the property; it is a matter of detail which I do not consider myself competent to deal with.

458. You have petitioned, then, for a Bill for the purchase of property which at any moment may become entirely depreciated?—Upon the grounds that I have stated, that it is comparatively a small matter to purchase them now, and it may be a very large matter to purchase them by-and-by, and apparently it would be necessary to purchase them at some time or other.

459. Mr. *Norwood*.] What is the cost of a telegraphic message from one of the head offices at Edinburgh to another portion of the town, say a mile or a mile and a half off?—There is no such office. The three offices are all within a dozen or two yards of each other. There is an office at the Caledonian Railway Station, which is towards the west of the town, but I should think that there is scarcely any communication between any of those head offices and the Caledonian Railway office. There is an office open one day in the week, on market day, in the Corn Exchange; but only one day in the week, and during the period of the court's sitting, which is about one-half of the year, there is an office in the lobby of the court-houses; but in the whole southern district of Edinburgh, comprising by far the largest portion and extending to somewhere about two miles from the head offices, there is no telegraph office whatever.

460. In

460. In point of fact the people in Edinburgh cannot use the telegraph system for the conveyance of messages from one part of Edinburgh to the other?—No; we never dream of such a thing.

461. What is the cost of sending a message from Edinburgh to Leith?—Sixpence, I believe.

462. Does that include delivery?—Yes; that includes delivery. I may state that my own house is about a mile within the outer limits of the postal delivery, and that if I get a message from Glasgow, the regular charge for which is 1 *s.*, I have an additional 1 *s.* to pay for the delivery of that message; but under the proposed postal system I understand that it would be delivered for 1 *s.*, whereas now it costs 2 *s.*

463. Mr. *Leeman.*] How far are you from the nearest telegraph station in Edinburgh?—A mile and a half.

464. Do you expect that by this Bill the Post Office will deliver that mile and a half without any extra charge?—I understand so, because it is within the usual postal delivery.

465. I understand you to say that you are a director of the North British Railway?—I am.

466. At the time when you signed this Petition I understand you to say that you were not aware that the railways were in any degree affected by this Bill?—When I drew up this Report I was not a director of the North British Railway.

467. You sent in a Petition in favour of this present Bill?—Yes.

468. I think you have told the Committee that at that time you were not aware that the Bill at all affected the railway interests?—I do not know that I said that exactly.

469. But were you aware of it, in fact?—I certainly was aware that the Railway Companies had certain interest in connection with the Telegraph Companies, but in signing the Petition I signed it as chairman of the Edinburgh Chamber of Commerce, and not as a director of the railway; and I was not aware that any interests that the railway had were adverse to the public interests.

470. When you signed the Petition were you aware that the North British Railway was affected by the Bill?—To a certain extent I was aware that they had some interest in it.

471. Then were you a party to this agreement which had been come to the other day with the North British?—I never saw it till I saw it yesterday or the day before; but I was no party to making the agreement.

472. Have you attended the North British Directors' meetings lately?—Yes, I have.

473. Had you heard that this question with respect to the interest of the North British Company was to be discussed?—No, I had not.

474. Have you any idea of the amount, under the agreement which has been put upon you this morning, the North British Company is to claim?—Yes, I have some idea.

475. How much do you expect to get?—I have no idea as to that, but I may observe that I think it is 20 years' purchase; I only read the agreement very cursorily.

476. Do you think, then, that 20 years' purchase is no very important matter?—The principle, I think, is an income of 48 *l.* a week; but, as I say, I read the agreement very cursorily. I am not here in connection with the North British Company at all. I came up solely on account of the Glasgow meeting.

477. Do not you know that the North British has gone into this question, and has itself fixed the figure which it ought to have for its goodwill?—I have read the agreement cursorily, but I was not a party in any way to this agreement.

478. Is Mr. Mason your manager?—He is.

479. Just look at that paper (*handing a paper to the Witness*)?—I have read all these conditions, I think, and they seem to me, upon the whole, reading them cursorily, to be fair.

480. Is this fair, is this what the North British Company expect to get under the agreement, "That in consideration of the nearly total loss to the Railway Company of the public message traffic, which is rapidly increasing in value, the

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Government allow the Railway Company say, 100,000 *l.* for goodwill?"—That is not in the memorandum which I read.

481. But that is the memorandum, and you say that you think that is fair?—I read the agreement, but that is not in the agreement, I am confident.

482. This document is a copy of a memorandum by Mr. Mason; he is your manager, is he not?—Yes, he is our manager; but this is not the agreement which I read certainly; and that such a clause as you have read to me is not in that agreement I am perfectly confident.

483. Is Mr. Mason the gentleman who has negociated the thing with the Post Office?—Mr. Mason, I understand, and the chairman of the company, who are both in London.

484. Is Mr. Mason the gentleman who would have the negociation of a matter of this kind with the Post Office?—I think so with the chairman. I know nothing of that memorandum. I read, as I say, the agreement after it was framed. I never saw it beforehand, but I know that that is not in it.

485. You have told the Committee, in answer to the Right Honourable Member for the City of London, that you have no fears as to the Consolidated Fund having to pay any portion of the expense?—I have none.

486. You also said that that proceeded upon a calculation of yours which you made some time ago?—It can scarcely be termed a calculation, but it was reasoning from analogy, and reasoning from the success of reductions of postal rates, and calculating that there would be a large increase accruing from telegraphic communication.

487. What was the amount upon which you calculated that there could be no loss to the revenue?—We only gave an approximate statement in that Report three years ago.

488. How much?—About 2,500,000 *l.* at that time.

489. Is that the calculation upon which you proceed when you say that you believe that the system, in the hands of the Post Office, would be self-supporting?—We have had further proof of the correctness of our calculations in the progress which communication has made in the interval; and we believe that a reduction in rate, and a uniform rate, would immensely extend the business.

490. Will you have the goodness to answer my question; do you now assume that 2½ millions, which was the amount of your calculation, will not be exceeded when you say that the revenue will not have to suffer?—We assumed at that time that a sixpenny rate would be very much more than sufficient to pay for the purchase on such terms, we now petition in favour of the Government Bill which assumes a 1 *s.* rate, and we assume, and I think justly, that this 1 *s.* rate will more than cover any additional sum that may be necessary to pay for the purchase of those rights.

491. Coming back to my question, do you anticipate any increase upon the 2½ millions as that which it will cost the Post Office to get possession of the telegraphs?—Yes, most decidedly, I have stated so, and I have stated further that I assume that if any more years elapse a still larger sum will have to be paid.

492. Then you do not anticipate that you will want more than 2½ millions?—I do anticipate that there will be more wanted.

493. How much more; you are here as a mercantile man to tell the Committee that you believe this will be self-supporting; how much more do you expect it to cost; do you know what interest will have to be paid?—I have not the materials now for minutely going into any calculation, but I certainly believe that it will be more.

494. Do not you think that a very material element in arriving at such a conclusion, consists in the question of how much is to be paid to each of the Railway Companies?—Most decidedly.

495. Assuming that 100,000 *l.* is to be paid to your own company under the agreement of this morning, did that enter your contemplation?—I do not know that 100,000 *l.* is to be paid; the figures which I have seen do not bear out anything of that kind.

496. But I have your own manager's document?—I have never seen it before; the figure is not in the agreement; I know it is not in the one that I have read.

497. Is

497. Is Mr. Mason here——

Mr. *Sargood.*] If it is any satisfaction to the Honourable Member, it is right to say that we will put Mr. Mason into the box if he desires it; we have no hesitation in doing that.

498. Mr *Leeman* (to the *Witness*).] Just tell me, is the Caledonian a larger system than yours?—No, not so large.

499. You heard the agreement this morning as to what is to be paid to the Caledonian Company?—I understand that it is based upon somewhat similar principles, but I do not think I have heard it this morning.

500. Were you here when it was read?—Yes; but I did not pay much attention to it.

501. Twenty years' purchase upon the eight heads?—I know that their telegraphic business is very much smaller than that of the North British, and therefore, if the figures which you have indicated are figures referring to the North British, I should take it for granted that the sum paid to the Caledonian must be very much less.

502. The saving is again an element which would enter into your calculations in determining the question of its paying?—Yes.

503. You say that you believe that this will pay?—Yes.

504. Is not the amount to be paid to the Caledonian an element which would enter into the calculation?—It is.

505. Take the London and North Western, that is a company larger than both of you put together?—Not in the mileage; I do not know, in fact, what private telegraphic business the London and North Western Company do.

506. Were you here yesterday?—Part of the day.

507. Did you hear all those agreements put in with the different Railway Companies?—I did not hear them read.

508. But I take it that if they are in the same position as the North British, the amount to be paid to each of those parties would largely influence the question, would it not, as to whether this is to be self-supporting?—Undoubtedly.

509. The Right Honourable Member for the City asked you as to the shilling rate, and I understood you to answer him that in Edinburgh you are prepared to pay more than a shilling rate?—If necessary; we do not anticipate anything of the kind.

510. Do you think that that is the idea in Edinburgh?—I believe that the idea in Edinburgh, and the idea in Scotland generally, is, that they wish it to be self-supporting, and that they wish the public to pay what is necessary to render it so.

511. Do you believe that any of the parties to that Petition expect, under any circumstances, to pay more than a shilling rate?—They certainly do not expect it, nor do I.

512. But you say you would be prepared to pay more?—I say so for myself. I have had no opportunity of consulting my friends upon the matter, and I believe that they as little anticipate the possibility of such a thing as I do.

513. You have told us your belief, that it would be contrary to all experience of the Post Office, if it did not become self-supporting; do not you know that it took 24 years for the Post Office to bring back its old revenue when it entered upon the penny postage system?—I am not sure that those figures are correct; if you say so, of course I take it for granted.

514. Have you ever read the returns?—I believe I have.

515. You are a commercial man, and, therefore, can tell me from that return whether it did not take 24 years to bring back the revenue of the Post Office to the figure at which it stood the year before the Post Office adopted the penny postage system (*handing a Return to the witness*)?—I see that there is put down here the net revenue, which does not look as if there had been a loss.

516. My question is, whether the revenue did not sink in the year following their taking to the penny postage system, and whether it did not take 24 years to bring it up to the amount at which it stood the year previous to the reduction?—That is a very different idea from what I understood or thought.

517. Do you know that that is the fact?—I believe it is; but I do not see any reason why that should be so in this case.

518. Would you be prepared to go on paying a higher rate for any period of time analogous to that?—So far as I understand, there was a nett revenue from the

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the Post Office during those years of which you are speaking. In the first place, I think, if the telegraph system pays itself as the Post Office seems to have done in those years, it does all that the public could expect, or that a commercial man would expect in the first place.

519. Speaking as a commercial man, did it not pay 1,100,000 *l.* less by adopting the penny-post system than it did before?—The public were perfectly satisfied that it should do so, and they have never complained of it.

520. But your answer was, that it would be contrary to your experience of the Post Office if they lost anything by entering upon this new speculation?—So I say; my experience of the Post Office was that it pays throughout.

521. Did not the Post Office lose this 1,100,000 *l.*, and continue to do so for 24 years after it began that new speculation?—Not as I understand it; as I understand it, the Post Office revenue did more than pay the expense of postal communication from the very beginning, and, therefore, it was yielding a revenue.

522. You have talked about those northern towns in Scotland; how long have you been a director of the North British Railway?—A year and a half.

523. Have you put up any telegraph posts during that year and a half?—We have, within that time; within the year and a half we have taken the management of our own telegraphic system into our own hands.

524. Have you put up telegraphs of your own upon your own line of railway?—Yes, we have.

525. In that time?—Yes.

526. What did that cost you a mile?—I believe the manager of the North British Railway is here, and will be able to state that; I have no sufficient knowledge upon the subject.

527. Have you any idea whether it is 5 *l.* a mile or 50 *l.*?—I have no distinct idea; I have no special information upon the subject.

528. Have you no idea what it does cost per mile to put up posts and wires?—I would not like to say that; I have no distinct idea upon the subject; I have no special telegraphic information.

529. The railway now goes within how many miles of Wick?—Within 60 miles of Wick.

530. Are there no telegraph posts over that 60 miles?—I think not.

531. Have you no telegraph?—I think not.

532. Can you form any idea of the population between the point to which the railway has gone and Wick?—I have no very distinct idea as to the state of the population of Wick.

533. Can you form any idea from the number of money-order towns that you see on that map; the red marks on that map, as I understand, are the places where money-order offices are?—There seem to be some seven or eight in the district.

534. Do you know what the population is to which the Post Office limits itself as regards money orders?—I do not know that they do limit themselves to any distinct amount of population.

Chairman (to Mr. *Scudamore*).] What is the population to which the Post Office supplies a money-order office?

Mr. *Scudamore*.] It varies very considerably, we go down to places of 400 or 500 inhabitants. Our rule is not with reference to the number of population, but to the probable number of money orders that the population, whether it is large or small, will require.

535. Mr. *Leeman* (to the *Witness*).] Did you hear Mr. Scudamore's evidence yesterday, where he stated that a money-order office was put on an average to 300 inhabited houses?—I rather think I did not.

Mr. *Scudamore*.] It is one to 1,400 houses.

536. Mr. *Leeman* (to the *Witness*).] Assuming that there is one money-order office to every 1,400 inhabited houses throughout the country, that includes the population of the large town of Edinburgh and large towns like Glasgow?—Quite so.

537. You see where those money-order offices are up to Wick?—Yes, quite so.

538. Take

538. Take it that it is 60 miles, can you give the Committee, or have you formed any idea, what it would cost to put up telegraph posts and wires along that 60 miles to Wick; looking at the population, how many stations are there; are there more than about three or four money-order offices in the course of that distance?—I may state, that just because in a national system such places would be supplied with telegraphic communication, even although it did not pay the doing of it, while they would not be supplied under a system such as the Electric Telegraph Companies' system, simply because they do not pay; that was one main reason why the Chambers of Commerce preferred a national system to the present system.

539. Then, although the putting up of telegraphs for those long distances may not pay, you still expect that in Scotland you are to have the benefit out of the Consolidated Fund of putting up those telegraphs for you?—We expect that the telegraph system will pay as a whole, and we believe that it does not pay at present to send letters in all probability to those long distances, yet it is a great advantage to the whole community that those letters are sent.

540. Were you ever at Wick?—Never.

541. Do you know anything at all about the population along that coast?—I know that it is a busy fishing district, and there is a considerable trade in various places along the line of coast.

542. Have you any idea of the population in any of those little villages?—It is so easily got, that if I had dreamt of the line of investigation; of course I could have crammed myself for such a purpose, but I did not see any occasion for it.

543. Do you expect that if this Bill passes into a law, you are to have a system of telegraphs over all this district, say between Inverness and Braemar, and those places?—We do.

544. Between those different red spotted places?—More or less.

545. What is the class of population in those villages that you think will ever use it?—In the town of Wick, of which I spoke more especially.

546. In that large district from St. Andrews, along that district between Braemar and Inverness; I mean those places where you see the red spots where money-order offices are, do you expect lines of telegraph to be made over all this country?—I know that railway lines, which are vastly more costly, are gradually extending in this district of country, and we know that, comparatively speaking, telegraph posts and wires cost a very small sum of money, and we calculate that in time, at any rate, they will be extended.

547. As the railways are extended?—No, independent of the railways, probably; we know that at present many telegraph wires are extended along the high roads.

548. But still there is the cost, and you do not seem to know the cost; will you allow me to ask you this, in the first instance, as I understand, you move in this matter as one of the Chamber of Commerce of Edinburgh?—I did.

549. And at that time your first suggestion was not that the Government should take the telegraphs?—It was that they should inquire as to the best mode of dealing with the subject.

550. Was not this it: "Means of improvement. Various plans offer themselves, by the adoption of which the present system of telegraphic communication might be much improved. One method suggesting itself is the amalgamation of the three existing companies under the sanction of an Act of Parliament, which might fix the maximum rate or rates of dividend and the maximum tariff chargeable. The Act might further provide that all increase of income, beyond what was necessary to pay the maximum dividend, should be applied either to a reduction of rates or to assist in providing dividend for such new capital as might be necessary for the extension of the lines to new districts of the country. The provisions necessary for the working and the extension of the system might be placed under the supervision of the Board of Trade." That was your first suggestion?—That was one method, but there were others immediately following.

551. And you illustrated that, did you not, by the case of the Edinburgh Water Company?—Yes.

552. The Edinburgh Water Company is an illustration of the working of a regulated monopoly, such as is here indicated. It is constituted by an Act of Parliament; its maximum dividend is limited to 6½ per cent., its maximum charge

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charge to 10 *d.* in the pound on the rental. Its increasing income has hitherto been applied in providing dividend upon capital required for the additional works necessary for the supply of water to an increasing population, but may yet be available towards a diminution of the water rate"?—That is one suggestion.

553. Did you not at that time make this proposal to the Government?—We proposed that the Government should inquire into those three methods which we indicated, and all other methods which might be suggested.

554. But, looking at the whole of your suggestions, you concluded thus, did you not, "They would therefore recommend that the Chamber memorialise Her Majesty's Government, requesting that a Royal Commission be appointed to inquire into the present system of telegraphic communication, with a view to its improvement"?—That was our first proposal.

555. And now you say that the other Chambers of Commerce in the country adopted your view?—They did.

556. And they did, in fact, make the same suggestion?—They did.

557. Then can you understand why a question of this sort, with the complication that you have heard of this morning and yesterday, was not submitted to a Royal Commission in the first instance?—As I stated before, we were informed, in the course of the following Session of Parliament, that the Government had obtained the materials and the information which we had recommended them to obtain.

558. Looking at the complicated interests involved in this question, would not one have thought that the Government should have appointed a Royal Commission before it came for this Bill; that is my question?—I may state that the publication of our report brought that further information; and amongst other information, we learned——

559. Will you answer my question?—I am going to give the reason why we changed our method.

560. Do not you think that it would have been better, seeing the complicated interests that were involved, that a Royal Commission should have issued?—We asked for it three years ago, and we should have been very glad to have had it then.

561. You know that a Royal Commission upon Railways did sit subsequent to that?—I know they did.

562. Do you know that the Post Office authorities went and asked before that commission that they might have the whole management of the railways of the kingdom?—I do not know that for a fact.

563. Would it surprise you if I told you that the Post Office authorities, through Mr. Hill, went and asked before that commission that the whole of the railways of the country should be put into the hands of the Government?—I do not know that it would surprise me had it been done at an earlier period. If you ask my opinion personally, I would say that it would have been very good for the country had some such thing been done.

564. Very good for the North British now, probably?—Very possibly, but I am speaking from the point of view of the Chamber of Commerce, and of the public.

565. You say that you afterwards got further information?—I do.

566. You have read, I have no doubt, that Blue Book which is before you?—I have.

567. Having read that Blue Book, has there been laid before Parliament any information except from parties who have been, more or less, themselves interested in the Post Office?—I think there has; I do not think that I am at all interested in the Post Office, and I laid information before the Government, at least, there is information published, not that I specially laid it before the Government, but there is information published here which I obtained directly from a friend in Brussels, Mr. Van der Maeren, who is the Chairman of the Tribunal of Commerce in Brussels.

568. I want to know whether there is any knowledge beyond that contained in that book, and whether that book contains any information other than that which has been supplied by officials more or less connected with the telegraph companies and the Post Office. First of all, with regard to Mr. Ricardo, the first person who was named yesterday; you heard Mr. Scudamore yesterday?—I heard Mr. Scudamore part of the time.

569. Do not you know that Mr. Ricardo was himself a proprietor in a Telegraphic Company?—I have no knowledge of the fact.

570. Mr. Allan,

570. Mr. Allan, who was mentioned yesterday; you heard Mr. Scudamore refer to Mr. Allan?—I know Mr. Allan as an old member of the Edinburgh Chamber of Commerce.

571. Mr. Allan, the electrician?—Yes.

572. He was connected with the company that went down, the United Kingdom Company?—I do not suppose that it has gone down.

573. It went down, in point of charge, and was not Mr. Allan one of the parties who suffered from the bad circumstances into which, for a time at least, the United Kingdom fell?—I have no personal knowledge of the fact.

574. Mr. *Charles Turner.*] You come here, as I understand, to give your own opinion and that of the commercial community of Edinburgh, and as far as you know, of Scotland and the United Kingdom, with respect to the purchase of the telegraphic communications by the Government?—Yes.

575. Is it your opinion from the sources of information that you have, and is it your belief that it is the opinion of the mercantile and trading community of Great Britain that the purchase would be an advantageous one for the trading and mercantile interests of the country?—It is.

576. With respect to the 1 *s.* rate about which you have been asked, you have been asked whether the 1 *s.* rate would be likely to pay; you do not expect in ordinary transactions to speculate upon the future to a certainty; but taking up those ordinary probabilities upon which you act in the common concerns of life, do you think that the Government would be justified in purchasing the telegraphic communications of the country in the expectation that the 1 *s.* rate would probably pay?—I think it would.

577. You take the ordinary probabilities in the same sort of calculation that entered into the mind of the public when the Post Office determined to establish the penny post rate for the whole communication of the country?—I think so.

578. Looking upon that precedent, do you think it is probable that the 1 *s.* rate would be remunerative?—I have no doubt of it.

579. But supposing that the 1 *s.* rate was not remunerative, do you think that the public would justify the Government in having entered into the speculation, and that they would be willing to pay a higher rate if the ordinary probabilities should fail them?—Taking into account what we think the great public interest, we think it would be justified.

580. Then as respects the purchase generally, whatever the rule may be which the Government will now have to pay for the telegraphic communications of the country, is it your opinion that it is desirable to make the purchase now, rather than postpone it for a future period?—I think that there is every probability that any delay would occasion an additional cost in making the purchase.

581. You think that any postponement would occasion a greatly increased cost to the country?—Yes, and it would be injurious to the public interest.

582. You said that in your opinion, if the telegraphic communications had been purchased some years ago, it would have been more advantageous to the country than a purchase made now?—I think so,

583. Do you think that the longer it is delayed the more injurious it will be to the country?—Most decidedly.

584. Do you look upon it that that purchase is essential to the progress of the mercantile and manufacturing interests of the country?—Yes, decidedly to the general progress of the country.

585. *Chairman.*] With regard to the financial part of the matter, I suppose you have not gone closely into that?—No; I have considered that a matter of detail with which I have nothing to do.

586. I suppose you took the calculations which Mr. Scudamore propounded and assumed that they were correct, did you not?—We made in our rough way a calculation three years ago, before I knew of Mr. Scudamore's existence, and at that time our calculation was a calculation which was assumed to be pretty correct by the mercantile community generally. Our calculation was that a sixpenny rate would be sufficient.

587. But you do not come here to give evidence upon the financial part of the scheme, but to express the views of the commercial community?—Yes, I do not feel myself qualified to give evidence upon the financial part of the scheme.

[The Witness withdrew.

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[*Mr. Leeman handed in the following Document*].

Copy of Memorandum by Mr. *S. L. Mason*, of the North British Railway.

Government Telegraph Bill.

MEMORANDUM.

Agreements to be cancelled.

(1.) That all contracts between the Railway Company and the Telegraph Companies be cancelled.

Poles not already property of Railway Company may be purchased at valuation.

(2.) That such of the poles on the company's lines of railway as may not be already the property of the railway company be purchasable by them at a valuation.

Government Telegraphs to be maintained by Railway Company.

(3.) That all poles, boxing, piping, and standards on the Railway Company's system be maintained by and at the expense of the Railway Company, the company making charge for rental to Government.

Railway Telegraphs to be maintained by Railway Company.

(4.) That the Railway Company also maintain their own wires, arms, insulators, and apparatus.

Government to use Railway Company's lines for telegraphs. Way leave; poles and two wires 50*s.* additional, wires 12*s.* 6*d.* per mile per annum. Maintenance 12*s.* 6*d.* per wire per mile per annum.

(5.) That the Government shall, as far as possible, use the company's lines of railway for their telegraph wires, the company undertaking to supply the poles, and Government paying the sum of 50*s.* per mile per annum for way leave for the first two wires, and 12*s.* 6*d.* per mile per annum for every additional wire. The company to maintain each wire at 12*s.* 6*d.* per mile per annum, but not to be liable for accidental breakage.

Railway Company to carry Government servants and materials for telegraph at fixed rates.

(6.) The Railway Company to carry the Government servants employed in connection with the telegraphs, and also all materials required for telegraph purposes at fixed rates.

Government to pay for goodwill.

(7.) That in consideration of the nearly total loss to the Railway Company of the public message traffic, which is rapidly increasing in value, the Government allow the Railway Company, say 100,000*l.* for goodwill.

Public messages may be received and transmitted by servants of Railway Company. Allowance, 50 per cent. of receipts.

(8.) That, as it would be a great public convenience, the Railway Company's servants at railway stations continue to receive, and, if required, transmit public messages on the wires of the Railway Company, the Railway Company receiving as remuneration 50 per cent. of the receipts.

Railway Company's right to erect private telegraphs reserved.

(9.) That the right of the Railway Company to have and erect private telegraphs, such telegraphs not being used for pay or profit, be reserved.

Railway Company to oppose second reading of Bill, unless above terms agreed to.

(10.) That the Railway Company oppose the second reading of the Government measure, so far as it may tend to prevent the obtaining of terms less favourable to railway interest than those above mentioned.

John Patterson, Esq., called in; and Examined by Mr. *Sargood*.

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588. You are a Merchant at Liverpool, and, I believe, President of the Chamber of Commerce there?—I am.

589. Have you for some time past turned your attention, and has your Chamber of Commerce turned its attention, to the question of telegraphic communication in your part of the country?—We have.

590. Is there a strong feeling amongst you that there are openings for improvement?—Yes, there is.

591. As early as 1856, did your Chamber petition the House of Commons, calling its attention to the state of telegraphic communication in the country?—We did.

592. I believe, as compared with that in foreign parts?—Yes, with Belgium.

593. And rather to the disadvantage of this side of the water?—Yes.

594. In December 1866, I think the matter was referred to a Committee of your Chamber of Commerce upon the motion of the president at that time?—In May we petitioned, and then in December again a former President of the Chamber, a Mr. Macfie, brought up a motion upon the subject.

595. Was

595. Was that with the object of asking the Government to consider the propriety of acquiring the telegraphic system and reducing the rates?—The motion was "That it be referred to the Home Trade Committee to consider the propriety of asking Government to establish in every parish in the kingdom a telegraph office, to convey messages at a uniform rate, not exceeding 6*d.* for 20 words."

596. In the following month of January, that is in 1867, I think you had your annual general meeting, had you not?—Yes.

597. Was the subject brought forward by your then president, Mr. Rawlins?—It was referred to by him.

598. Mr. *Goschen.*] Are you the successor of Mr. Rawlins.?—Yes.

599. Mr. *Sargood.*] Did he express, and did you concur in that expression of opinion, that the then present cost of a message was so great that the vast masses of the people could not use the telegraph, and that the adoption of a uniform charge like that of Belgium, that is 5*d.*, would wonderfully economise the national resources and infuse fresh life and vigour into commercial and social life?—Yes, those are the words.

600. Then, I think in April 1867, the Chamber memorialised the President of the Board of Trade, did they not?—Yes.

601. What did they pray in their Memorial?—"That the necessary steps may be taken for the assumption by Her Majesty's Government of telegraphic communication throughout the kingdom, and for such extension of the same, accompanied by such a reduction and uniformity of charge as Her Majesty's Government may seem fit."

602. I think they went on a little further then than that, did they not; did they suggest the establishment of stations in connection with the Post Office?—One of the representations of the Memorial is, "That if placed under the management of the State, telegraphic stations should be established in connection with the Post Office in all towns and villages containing more than 500 inhabitants, and that the system should be further extended from time to time, as found practicable." They did not memorialise in the words of the original motion, which was that it should be carried into every parish; but they ask that, in the first instance, it should be carried to every town and village of more than 500 inhabitants.

603. I think you had your half-yearly meeting in August 1857?—Yes.

604. Mr. Rawlins was still president at that time, was he not?—Yes.

605. Was any opinion expressed then of satisfacion or otherwise at the prospect of the Government taking up the question?—There was.

606. What was the feeling of the Chamber at that prospect, did they approve of it?—The President said, "I have every reason to believe that the arrangements, which will ultimately place the whole of the telegraphic lines of the United Kingdom in convenient connection with the Post Office department, are favourably progressing; arrangements which will be accompanied by reduced charges, extended lines, and greater facilities of every kind." That was received with satisfaction.

607. I believe that you had a report made, had you not, at that meeting?—Yes, it is a printed report.

608. Was the adoption of it moved by the Honourable Member for Liverpool, Mr. Graves, at that meeting, do you remember?—It was.

609. Did he speak at length upon the public satisfaction that was felt at the prospect of this matter being taken up by the Government?—He did; he stated in particular, "I have long thought with this Chamber that the telegraphic system of the country is not made as useful to the public as it might be." And he then went over some figures as to the telegraphic communication in Belgium, Switzerland, and other countries, and compared them with our own.

610. I believe, coming down to February of the present year, the attention of your Chamber was called to the "Gazette" notice of the intention of the Government to bring in this Bill?—It was.

611. And did that meet with the unanimous approval of the Chamber of Commerce?—Yes; it was rather a remarkable meeting at which we were favoured with the presence of the Right Honourable Member for London. The President on that occasion said, "You will have been pleased to see the decided reduction in the rates of the Atlantic Telegraph Cable, and that under the reduction the

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returns are increased by over 200 *l.* per day. Now, will not a similar result follow on the reduction of our own internal telegraphic rates. This Chamber has frequently pronounced in favour of the resumption by Government of all the telegraphic lines in the United Kingdom. You will find that a "Gazette" notice has been given that a Bill will be introduced this Session of Parliament with that object. I do not say we have much cause of complaint against the existing companies. Doubtless they have acted as liberally as any public companies could have acted, whose first duty was to their own shareholders. Their charge can only be looked upon as high when compared with what they might be, and will be when the lines are worked by the nation and for the national benefit. But their difficulties of transmission have made the system inoperative in all but the large towns, and those smaller towns within easy reach of a station. With a station, however, at every Post Office, with a uniform rate of 3 *d.* or 4 *d.* for a minimum message, and ½ *d.* or 1 *d.* for every word beyond its own telegraph system, will work most kindly side by side with our postal system, to the manifest advantage of both. When the Bill is introduced I would bespeak for it the support of the Members of Parliament now present." The last speaker was Mr. Rawlins, the then President of the Chamber of Commerce, and the speaker from whom I have quoted before was Mr. Graves.

612. I believe in April 1868, your chamber did Petition this House in favour of the Bill?—They did.

613. Did you afterwards have a special general meeting of your chamber in order to forward another petition to this House that the Bill might be passed this Session?—There was considerable anxiety felt in Liverpool when it was perceived that there was so much delay in the passage of the measure, and we were anxious to express a further opinion upon the subject, and so strongly was this expressed by many gentlemen that I thought it my duty to call a special meeting of the chamber to consider the question.

614. And that resulted, I believe, in your presenting a Petition praying for speedy action in the matter?—It did.

615. Do you believe that it would be detrimental to the interests of the country and to everybody in a matter of this importance to have it needlessly delayed?—I do believe so; that is our feeling generally in Liverpool.

616. I think in addition to your chamber, the Tradesmen's Guild in Liverpool had a meeting upon the subject?—I had a communication from the President of the Tradesmen's Guild, addresed to me as president of the chamber upon the subject of the reduction of the sample post, and he pointed out the importance of a reduction in the charge made for the transmission of samples, and he asked for our support, and he said that they had noticed with great pleasure that we were acting in the matter of telegraphs, and that they would give us their cordial support in so doing.

617. Are you able also of your own knowledge to speak as to the views of the press in Liverpool?—Yes, I called next an informal meeting of a number of gentlemen to confer on the subject; some of them members of the chamber, some of them previous members of the council, the president of it, and also the representatives of the press, which was very largely attended; and at which there was a very general expression of opinion, though no formal resolution was passed, in favour of the measure.

618. I may put it to you generally; have you heard any expression of opinion of any importance in the contrary direction?—No, I have not heard any feeling in Liverpool in opposition to the Bill at all, unless on the part of one or two shareholders in the companies who express a feeling in favour of protecting their own interests.

619. But not on any public grounds?—No, nor on the part of gentlemen actively engaged in commerce either; only from one or two retired persons.

620. Do you believe that the reduction of charges upon telegrams would increase their number most materially?—I do.

621. You state that, as a commercial man, having experience in the use of the telegraph for commercial purposes?—Yes, I should say so from my experience.

622. Many transactions in business, I suppose, are carried on by means of the telegraph?—Yes, many large transactions, to a very large extent indeed, are almost continually carried on by telegraph, to the exclusion of other means.

623. If

623. If the rates were smaller, I suppose that would be an inducement to carry on smaller transactions bearing smaller profits?—It would.

624. Do you think that it would be a convenience of which tradesmen, and others in a smaller way of business than your own, would avail themselves freely?—I do; for I notice, even in my own business, that in the districts to which the charge is 1 *s.*, small parcels of goods are often ordered by men who would not have used the telegraph if there was a heavier charge, even although they still come within the category of being wholesale transactions.

625. You do not desire to reproach the Telegraph Companies in any way for not having done what might be reasonably expected of them?—No, I think they have been reasonable and fair in their modes of dealing with us.

626. Do you believe that the chance of the extension of their utility will be much increased if the matter should change hands?—I do.

627. If the Government take them up, of course it will be a species of amalgamation. I will just read to you one paragraph from a letter of Mr. Grimston, the Chairman of the Electric and International Telegraph Company, and ask you whether you agree with it. "We are unwilling to sell our property at all; we are earning a very handsome dividend for our proprietors at a low tariff fixed by a Parliamentary Committee, of which the Earl of Devon was the Chairman. Had the companies been allowed to do what the Government now proposes to do, viz. amalgamate their undertakings, there is no doubt that the tariff would have been as low long ago as the Government Bill now proposes to make it."

628. (To the *Witness*.) Taking that as the opinion of a very experienced gentleman, do you coincide with it?—In reply to that, I may say that my attention has not previously been called to this observation which the learned Counsel has read, but it seems to me to point to the creation of a monopoly on one hand, and, of all other things, I would most strongly protest against that; I would believe it to be an intolerable monopoly.

629. But supposing it is divested of being a statutory monopoly, do you agree with Mr. Grimston, that is the way to lower the rate by getting it under one management?—I believe he is quite right in that observation, but monopoly, in private hands, I would consider to be a grievance which should not be borne.

630. If Mr. Grimston thinks that the companies would have had the means, and would have employed them if they were so amalgamated, of bringing the rate down to 1 *s.*, you do not think that is a dangerous rate?—I believe that if the companies had amalgamated and had one management, it would work much more cheaply, and they would probably have seen the propriety of lowering the rate, but at the same time I believe there would be great danger connected with the concentration of so much power in the hands of any one trading company.

Cross-examined by Mr. *Denison*.

631. You say that you petitioned for this Bill?—Yes.

632. If I have got a copy of your Petition rightly reprinted here, you petitioned against the Bill so far as it fixes the rates. Is not this your Petition. "That your Petitioners while heartily approving of the principle of uniformity of charges adopted in Clause 9 of the Bill, are of opinion that the limit of 1 *s.* is too high"?—Yes.

633. That is still your opinion, is it?—Yes; we would have preferred 6 *d.*

634. Or possibly a penny?—No; I think practically we should not have proposed a penny.

635. Theoretically you would not, but practically you proposed 6 *d.*?—Yes.

636. Have you ever considered the total sum which seems likely to be paid by the Government, to acquire this monopoly and to carry on this business at a profit?—We did look at the sums total represented by the capital stock of the various companies, and presumed that when the Government came to be the buyer and they the sellers, there would be some considerable margin to be added to the amount of that capital stock.

637. Could you tell me what the total capital stock of the companies amount to?—I have not the figures before me, but it was somewhat between 2,000,000 *l.* and 3,000,000 *l.*, that they would probably require of capital altogether.

638. Those were Mr. Scudamore's figures, I think?—We had not Mr. Scudamore's figures at the time when we went into those calculations.

639. At that time you did not know, because nobody could know what was the nature of the agreements with the Telegraph Companies?—No, we did not.

640. Do you know them now?—Only in the general way that they have been mentioned here the last two days.

641. From the way they have been mentioned here the last two days, have you formed any estimate of the capital that will now have to be found by the Government?—I think it is possible that it might be increased by 1,000,000 *l.* or so.

642. But a million or so is a widish thing?—Yes, it is a large sum, certainly.

643. Have you paid enough attention to the proposed terms and to the capitals which you know, to be able to make a calculation yourself, in a rough sort of way, as I have been making it?—I have not gone very minutely into the matter.

644. Have you at all?—One cannot help sometimes figuring in one's head.

645. I thought you were the sort of man to figure in your head. Now, then, will you bring the figures out of your head, if you please, if you have got any in it?—My impression is that a sum between 150,000 *l.* and 200,000 *l.* per annum would be required for interest probably upon this large capital.

646. At what rate of interest?—The rate at which the Government usually contract loans; about 3⅓ per cent. or 3¼ per cent., possibly.

647. What capital do you make that represent?—The figure that my mind turned upon, from 4,000,000 *l.* or 5,000,000 *l.*

648. So the figure that my mind turned upon was rather fiveish than fourish?—I do not adopt that observation.

Mr. *Sargood.*] I think it right that I should tell the Committee that we have evidence of this character from the Chambers of Commerce of Leeds, Hull, Derby, and Manchester. I do not know how far I ought to intrude it upon you without your own consent, whether you think it necessary or not.

The *Chairman* stated that the Committee did not think it necessary to to hear any evidence from any of the Chambers of Commerce, with the exception of Manchester.

649. Mr. *Goschen* (to the *Witness*).] I understand you to say that there are no people of position in Liverpool whom you have heard express an opinion hostile to this Bill?—I have not met with any.

650. Would you be surprised to hear that there were people moving freely about in the highest circles of mercantile life in Liverpool who hold opposite views?—It would come upon one with surprise, because the press has been always in one way, and general opinions find their way through the press.

651. Who is the chairman of the Mersey Dock and Harbour Board?—Mr. Brocklebank.

652. Are you aware that Mr. Brocklebank has petitioned against the Bill?—I was not aware of that.

653. Therefore, as far as the Chamber of Commerce represents the mercantile opinion in Liverpool, it does not represent the opinion of the chairman of the Mersey Dock and Harbour Board?—It appears that it does not represent his opinion in this case. He has not given any public expression to it in Liverpool that I am aware of.

654. You cannot, therefore, assume that the whole mercantile opinion of Liverpool is in favour of it, without any exception?—There may, no doubt, be exceptions.

655. Are you acquainted with Mr. Inman, at Liverpool?—Yes.

656. Is he one of the largest steam shipowners in Liverpool?—Yes, he is a large steam shipowner.

657. Were you aware that he had petitioned against the Bill?—I was not aware of it.

658. In fact, were you aware that Petitions had been presented from Liverpool gentlemen against the Bill?—I was not. I know that a Petition was laid upon the Exchange newsroom table in favour of the Bill, which was signed by a very large number of people in a short time, and certainly I never noticed that there was any Petitions against it, or that any other Petition had been exhibited in the Exchange newsroom, and I do not believe there was.

659. You

659. You would say that the general body of opinion in Liverpool is in favour of the Bill?—Yes, decidedly.

660. You would, perhaps, think that you had gone a little too far in saying that there were no people of position who were against the Bill?—If I conveyed that impression to the Committee I have conveyed a wrong one. I said that no expression of opinion hostile to the Bill had reached me unless in one or two individual cases, and that those were not cases of persons who were actively engaged in business; but I by no means meant to say that there may not be people in Liverpool who hold a different opinion.

661. In those cases which I quoted to you, you would say that Mr. Brocklebank and Mr. Inman certainly stand high in the Liverpool commercial world?—They do, decidedly. Mr. Inman is a member of the Chamber of Commerce, and he certainly took no opportunity of stating his views at the special meeting of the Chamber; and I think that Mr. Brocklebank is a member as well.

662. Are you aware that at the meetings of the Chamber of Commerce it frequently happens that upon a majority a measure is passed without much discussion?—It did happen in this case that we had the advantage of discussion, inasmuch as Mr. Jevons, a gentleman of respectability, expressed an opinion contrary to that of the general body, and it was discussed by Mr. MacIver and Mr. Lamport, and by other gentlemen of position in the community.

663. Was that meeting in April?—No, that was a meeting held recently, within the last few weeks. There was a meeting in February and one again in June. The general Chamber petitioned in April. I am speaking of public meetings when I speak of the meetings in January and June.

664. Was there any discussion in the council at the time?—Yes, there was a discussion, but I am not aware that there was any counter-motion; I really think there was not.

665. Did you hear the examination of the last witness?—I did.

666. Do you concur generally in what he stated?—Generally I do.

667. Do you concur in this, that you would rather have an increase in the rates than a charge upon the Consolidated Fund?—I take a somewhat different view of that question; I look at it in this light, that supposing for a time there was a loss of 20,000 *l.*, 30,000 *l.*, or even 50,000 *l.* per annum, I believe that in a great undertaking of this kind it would be worth while for the nation to suffer loss for a period of three years, five years, seven years, or even 10 years, with a view of being recouped the amount rather than to depart from the rate of 1 *s.*

668. In that respect, as we shall not call many witnesses from the Chambers of Commerce, let me ask you who do you think represents the feeling of the majority, you who say that you think that the State might well afford to bear loss for the great public objects of the Bill, or the other gentleman who told us that the system ought to be self-supporting, because that is an all important difference?—I hold that the system ought to be self-supporting; and I hold that in all calculations that would be made for the purpose of carrying the matter out, the self-supporting character of the charge ought to be kept in view; but I do not conceive that it is a certain fact that it should be self-supporting from the moment that it started.

669. Would your opinion with regard to the Bill be altered if you could not secure a reduction of the rates?—No; I would think that even if the rates were practically as high as they are at present it would be better that the system of telegraphic communication should be in the hands of a public authority rather than as it is at present.

670. You would put the monopoly in the hands of the Government?—I would.

671. It would not be an intolerable monopoly in the hands of the Government?—No; of course I think it would be very different in the hands of the Government than what it would be in the hands of the company.

672. But you would be prepared to face this contingency that the Government might have to raise or keep high its charges rather than have any loss thrown upon the Consolidated Fund?—Yes; but I do not look either to the increase of the charge or the keeping of the charge high as a means to get out of any financial embarrassment; I would rather look to reduction as the means of getting out of it.

673. Do you think that you could have a uniform rate; has this been considered by the Chamber, that a uniform rate would be harder upon the towns than

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than it would be upon the country?—I do not think that that point has been raised; I do not myself see that there would be any difference.

674. You can see, can you not, that in towns you could work much more cheaply than in thinly populated districts?—Yes; but the way we look at the matter is, to take the small returns which the Post Office earn when letters can be carried and delivered all over the kingdom with a profit at 1 *d.*; whereas in some cases it may cost 3 *d.*, or 4 *d.*, or 6 *d.* to deliver them, and yet upon the whole it is better for the nation to have a uniform charge.

675. Do you think much of the responsibility of the Government not attaching and their not being liable to pay compensation in any case?—No, I do not attach any importance to that.

676. Did you ever have any experience of companies paying for messages that have been wrongly delivered?—I have had two or three cases in my own experience, and I have obtained a return of the payment of the cost of the message in two or three cases where there were clearly blunders made in the transmission, and there was more trouble I thought with it than the amount was worth. But as regards compensation for losses which I have suffered by their blunder I have never obtained any. I once or twice sought for it, but I found it was no use.

677. You have claimed it?—Yes.

678. Are you aware that enormous losses have been incurred?—Yes, I have suffered some myself.

679. Practically speaking the liability of the companies, if it exists, is of no use to the commercial community?—It is of no use.

680. So that in that respect you would have no fear from the change?—No, I do not think it is of any importance.

681. Mr. *Charles Turner.*] Looking at the way in which the liability of the companies is defeated by those conditions on the back of the agreement, is it your opinion that it is much security to the trading community?—No, I think we are just left to the ordinary obligation that people are under to do what is best for their own profit, and I consider that the Telegraph Company give as much care and as much skill as they think they can afford, and that we have no guarantee beyond that.

682. That is not exactly an answer to my question; you are aware that there are certain conditions on the back of the agreement; looking at those conditions, do you think that, practically, the public have much security from the supposed liability of the company?—I do not think that they have any practical security whatever.

683. Looking at the question which the Right Honourable Member for London put to you, he has mentioned two gentlemen of the highest respectability, Mr. Brocklebank and Mr. Inman; but what is your opinion of the general feeling of the trading and commercial community of Liverpool, taking both merchants and tradesmen?—It is overwhelmingly in favour of that which has been expressed by the Chamber of Commerce.

684. Mr. *Norwood.*] In what trade are you engaged?—Chiefly in the corn trade and the American trade generally.

685. Are you in the habit of receiving telegrams from foreign countries?—From America we are generally.

686. But not from the Mediterranean or the northern countries?—No; we are sometimes from the continent of Europe, but not frequently.

687. You are not able to inform the Committee as to the state in which those telegrams are very often received; whether you receive them in a correct and proper form or not from abroad?—I had occasion some time ago, being in Antwerp, to communicate with my own house in Liverpool, and I found that the telegrams were very well transmitted, and very rapidly transmitted.

688. When the sample post was introduced into the country are you, or are you not, aware that there was an enormous increase in commercial transactions in consequence?—Decidedly.

689. It was very freely used by brokers who sent parcels of tea and sugar and various articles by post, and by that means they were able to reach small retailers in villages, which otherwise they could not have done?—Decidedly they would have been unable to do so, only for the very useful accommodation which has been afforded them by the Post Office, but they have placed a different rate upon samples to the rate by book post.

690. Are

690. Are you of opinion that facilities of communication encourage trade and induce new trade?—Yes, no doubt.

691. Therefore you think that if the telegraphic system was in the hands of the Government, and they were able to give greater accommodation to the public, a very great increase of trade would result?—Certainly.

692. *Chairman.*] Do you think that the increase of trade would bring in money to the Exchequer, apart from the money that would come in as payment for the messages themselves?—I do.

693. You have been asked about certain gentlemen from Liverpool who petitioned against the Bill; are you aware that Mr. Brocklebank, whose name has been mentioned, is a large shareholder in one of the Telegraph Companies?—I believe I have noticed his name in one of the lists of shareholders.

694. Do you know that he has petitioned against the Bill?—I have heard it mentioned.

695. And that he is represented here by an agent?—I was not aware of that.

696. Do you suppose that his petition is in his character of chairman of the Dock Company, or as a shareholder in the Telegragh Company?—I should say most decidedly it was not in his character of dock chairman. I believe if it was supposed that he, as dock chairman, had petitioned the House against the Bill, there would be an expression of public opinion which would oblige him to withdraw it.

697. Do you know anything about the other gentleman who has petitioned? I see there is a Petition calling itself a Petition from merchants, traders, and others in Liverpool, and there are only four gentlemen who signed it; do you know anything of the gentlemen; perhaps you will look at the names?—Mr. Riddock's name I have not heard before; Mr. Culshaw is known as a surveyor and architect in the town; the other two gentlemen are known to me as merchants; Mr. Brocklebank and Mr. Inman are shipowners rather than merchants.

698. You do not know how far, with the exception of Mr. Brocklebank, any of the other gentlemen are shareholders in Telegraph Companies?—I do not.

699. Mr. *Graham.*] Are you aware that the Telegraph Companies allow very large discounts to parties using their lines to a large extent?—No, I am not aware of that. There was such a practice, but I understand that it has been given up.

700. Are there not such discounts allowed upon the purchase of stamps that are used by them?—I think not; if it is, it is a very small one. It used to be considerable, but I understand the usage is given up.

701. It used to be, I believe, from 12 to 20 per cent.?—I think it was 25 per cent.

702. That does not exist now?—It does not.

703. Mr. *Sargood* (through the *Committee*).] As the name of Mr. Culshaw has been mentioned, are you aware that he is the surveyor of the London and North Western Railway?—I do not know that he is.

704. Mr. *Leeman.*] The Petition which has been laid in the Exchange was a Petition in favour of a sixpenny rate, was it not?—I do not remember the exact phraseology employed in the Petition; it was not one promoted by the Chamber of Commerce, but was got up by gentlemen outside the Chamber.

705. What was the Petition of the Chamber of Commerce?—For a sixpenny rate.

706. Is it the general feeling of the Chamber of Commerce that it should be 6*d.*?—Yes, that it should be 6*d.*

[The Witness withdrew.

[Adjourned to Monday, at half-past Eleven o'clock.

Monday, 6th July 1868.

MEMBERS PRESENT :

The Chancellor of the Exchequer.	Mr. Norwood.
Mr. Goschen.	Mr. Potter (Carlisle).
Mr. Graham.	Mr. Charles Turner.
Mr. Leeman.	Sir Frederick Heygate.
Mr. Sandford.	

THE CHANCELLOR OF THE EXCHEQUER, IN THE CHAIR.

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Mr. *Hope Scott* was heard to state that the following heads of arrangement had been come to as a basis of agreement with most of the Railway Companies for whom he appeared :

HEADS of ARRANGEMENT between the Post Office and the Railway Companies.

1. AT the request of any of the companies, existing agreements to be at an end, and a new agreement made.

2. Every company to have their own system of railway telegraphs on railways and canals, independent of the Post Office Telegraph, as expressed in Clause 4 of the Caledonian Agreement.

3. Railway telegraphs to be worked solely by Railway Companies' servants.

4. Railway staff may, if agreed, act as agents for the Post Office in the transmission of messages, and, in such cases, the Post Office will pay a sum to be agreed for such services.

5. Public messages may, by arrangement between the companies and the Post Office, be transmitted through the Railway Companies' wires, and the Post Office to pay for such services, railway messages having the right of priority.

6. Public messages sent to or from railway stations shall be transmitted by the Railway Companies' staff (Clause 8 of Caledonian Agreement), as agents for the Post Office, within such hours as shall be agreed upon, and the Post Office shall pay for such services.

7. The Post Office to have perpetual way-leave over the lines of the Railway Companies, and the wires (and posts, if any), now exclusively used for public messages, to become the property of the Post Office.

8. The Post Office may have the right to affix wires to existing posts (if they can bear them), and the Railway Companies may have a like power to affix wires to the Post Office posts, if sufficient for the purpose, and the cost of maintenance of such posts shall be divided between the Post Office and the Railway Company in proportion to the number of wires belonging to each owner on each post.

9. The Railway Company to erect and maintain all wires and poles on the railway, and the Post Office to pay for those belonging to the Post Office on terms to be agreed or settled by arbitration.

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10. The Post Office to provide instruments, &c., for post office purposes in railway stations, and the Railway Company to maintain them.

11. Railway Companies' messages, on the business of the Railway Company to places beyond the limits of the railway, are to be carried free by the Post Office to their respective destinations.

12. Railway Company to have the power to grant way-leaves to parties for the erection of private telegraphs (saving clause forbidding such telegraphs to be for public traffic to be added).

(*See Clause* 2 *of Caledonian Agreement.*)

13. The payment to be made by the Post Office for the perpetual way-leave to be agreed upon, and, failing agreement, to be settled by arbitration, the arbitrator having regard to the existing agreements between the Railway Companies and Telegraph Companies, and to compulsory sale.

14. Caledonian Compensation Clauses to be included when applicable.

15. Arbitration Clause to be as in Caledonian Contract (mutually to be altered).

And he applied to the Committee to adjourn the consideration of the railway portion of the case to Thursday morning, by which time in all probability the agreement would be completed.

Sir *Mordaunt Wells* and Mr. Serjeant *Tindal Atkinson* were heard, and made the same application on behalf of the companies they represented.

Mr. *Frank Ives Scudamore,* further Examined.

Mr. *Frank Ives Scudamore.*

707. Mr. *Vernon Harcourt.*] I see that among the Papers you put in on the 2nd of July, was one from the British and Irish Magnetic Telegraph Company acceding to the terms you had offered, but in that letter is a sentence to this effect; "In so doing it is right I should draw your attention to the fact with which you are already acquainted, that you will as such purchasers have the benefit of and be subject to the liabilities attaching to an agreement with the Submarine Telegraph Company." We have not that agreement *in extenso,* but is the effect of that agreement between the Magnetic Telegraph Company and the Submarine Telegraph Company, that all the messages for the Continent collected by the Magnetic Telegraph Company should be sent by the Submarine Telegraph Company?—It is.

708. Then I see further on in your examination, at Question 182, you state, "Our proposal necessarily is to acquire the cables belonging to the Electric and International Company as a part of the undertaking of that company. If we acquire the property of that company we also derive from them their obligations, and we shall therefore be bound to Mr. Reuter in the terms of their agreement with him. Further than that, if we acquire the property of the British and Irish Magnetic Company we shall be bound to the Submarine Telegraph Company by the terms of the Agreement between that company and the British and Irish Magnetic Company." In your judgment, assuming those different submarine companies to remain independent and not to be purchased, would not there be an incompatibility on the part of the Post Office, as the proprietors of all the telegraphs in England, in fulfilling those obligations?—Without going so far as to say that there would be an absolute incompatibility, I can say, as far as I can see at present, the difficulty of fulfilling both obligations would be so great, that it would be almost necessary for us to come to an arrangement that should be satisfactory on the one hand to Mr. Reuter, and, on the other hand, to the Submarine Telegraph Company; a proposal from Mr. Reuter has been put into my hands this morning, I have not had time to examine it, but, from a conversation I have had with him, I have no reason to doubt that by Thursday we shall have come to a satisfactory arrangement,

ment, and I have as little doubt that we shall also come to a satisfactory arrangement with the Submarine, and with the Atlantic and Anglo-American Companies.

Mr. *Frank Ives Scudamore.*

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709. By the 8th clause of the Agreement between the Electric Telegraph Company and the Reuter Company, they are bound to forward by the said three wires (that is, the Reuter Company) "all messages collected or received by the Electric Telegraph Company in the United Kingdom for the following kingdoms and places, Hanover," and other places; "and also by the said three wires to send at least 200 messages per day on the average." That would be an obligation on the part of the Electric Telegraph Company to send a definite class and number of messages by Mr. Reuter's wires?—Yes; we must either fulfil that obligation, or indemnify him for it.

710. How would it be possible, unless you purchased his concern, for you to fulfil that obligation to him, and at the same time fulfil the obligation on the part of the Magnetic Telegraph Company towards the Submarine Company to send all the messages by their wires?—I would rather not answer that question immediately, but I should be quite prepared to answer it on Thursday morning, and, I think, in a way satisfactory to your clients.

711. Sir *Mordaunt Wells.*] I believe that you have been in communication with the parties representing the Atlantic Cable Company?—Yes.

712. Do you think it would be convenient, in consequence of what has taken place, that the further consideration of their case should be postponed to Thursday?—I think it would; we have had not time fully to consider their proposition.

Mr. Serjeant *Tindal Atkinson* was heard, on the part of the Submarine Company, to apply that their case should stand over till Thursday.

713. Mr. *Rodwell.*] They are all connected one with another, are they not?—No, they are rather conflicting one with the other.

714. I mean they all want consideration together?—Yes.

715. The consideration of them is connected?—Yes.

[The Witness withdrew.

Mr. *Vernon Harcourt* was heard to apply that the further consideration of the Bill should be postponed till Thursday, by which time the result would be known as to the negociations now in progress.

Mr. *John Fox Turner*, called in; and Examined by Mr. *Rodwell.*

Mr. *J. F. Turner.*

716. You are a Merchant carrying on business at Manchester?—Yes.

717. You of course are in the habit of using the telegraph?—Yes.

718. I believe since the project has been before the public you have given the question a good deal of consideration?—Yes.

719. You are expressing not only your own opinions, but the opinions of a great many merchants in Manchester, with regard to the policy of transferring the telegraphs into the hands of the Post Office?—Yes.

720. Are you of opinion that it would be attended with great public advantage?—Yes.

721. What are the principal advantages you anticipate from it?—Concentration and cheapness.

722. I believe you have directed your attention to the state of things abroad. Are you of opinion that if the rates were lowered the telegraphs would be much more employed for matters of a domestic and social character than they are at present?—Yes.

723. Now the price being so high in your judgment operates against the more general use of it?—Yes.

724. It has been stated by the opponents, that putting those companies into the hands of the Post Office would create a monopoly which would operate prejudicially to the interest of the public; do you think that would be so?—No, because I think it is virtually a monopoly now.

725. In what way?—The rates are uniform, and in the event of your wanting

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any redress for any grievance the companies unite together and refuse to give it you.

726. Do you think if the telegraphic system were in the hands of the Government, public opinion could be brought to bear more readily, supposing any defects or inconvenience in the working of it were found by the public?—Yes.

727. It is stated also that if it were in the hands of the Government no damages could be recovered, nor any compensation made for any loss arising from non-delivery of a telegraphic message; practically is that the case now?—Yes.

728. You know there are certain conditions in the telegraph forms?—Yes.

729. Do they practically preclude you from recovering any damages, suppose your message is sent wrong?—Yes.

730. You do not anticipate that there would be any greater difficulty or inconvenience if the telegraphs were in the hands of Government than at present?—No.

731. I take it from you that there is a general feeling amongst the merchants of Manchester in favour of this Bill?—That is my impression as far as I have been able to ascertain their feeling, not speaking as representing any body of merchants.

732. Mr. *Goschen.*] Has there been any public Petition presented from Manchester?—I believe that there has been a Petition presented from the Chamber of Commerce in favour of a reference of this matter to a Parliamentary Committee.

733. There has not been any Petition from the general body of merchants?—Not that I am aware of.

734. You are not aware whether any Petition was put in the Exchange for signature?—I am not aware that there has been any.

735. Mr. *Turner.*] Does not an agreement exist between the Telegraph Companies as to the price for the transmission of messages between the same distances?—Yes, their rates are identical, I believe, between all the companies.

736. And that by agreement?—I cannot tell.

737. Is not that the general impression, that there is an agreement to charge the same as between the same places?—Yes.

738. With regard to the conditions on the back of the forms, do not those conditions practically remove any liability from the Telegraph Companies with respect to the transmission of messages?—I think they do.

739. Therefore, practically, there is no security to the public as regards compensation from the Telegraph Companies in case messages are improperly sent; is not it one of the conditions that they shall not be liable?—Yes, practically it is so.

740. With respect to the secrecy that would be likely to be observed with regard to messages, do you believe that the public in general would place the same confidence in the Government that they would in private individuals?—I think so.

741. Do you think that they would place even more confidence in the Government than they would in private companies?—Yes, I should say so.

742. Do you, in saying that, give the general feeling of the mercantile community of Manchester?—As far as I have been able to ascertain it; I should not like to pledge myself to give the general feeling of the mercantile community of Manchester.

743. You mix a great deal with the mercantile community in Manchester?—Yes.

744. If that had not been the general feeling, you would have heard an expression of feeling to the contrary?—I think so.

745. Therefore, mixing amongst the mercantile people of Manchester, and having the means of ascertaining the feeling of the mercantile community there, you think that is the feeling?—I think so.

746. That they would prefer to trust the employés of Government with respect to secrecy of messages?—I think so, but I hope that others will be here from Manchester as well as myself.

747. Mr. *Potter.*] You are a member of the Chamber of Commerce in Manchester?—Yes.

748. Are you aware whether they petitioned previously in favor of an alteration in the telegraph system?—I am not aware. I am aware that they petitioned latterly

latterly for referring this matter, I believe, to a Committee of the House of Commons. Mr. *J. F. Turner.*

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749. Merely for inquiry?—Yes, they have not expressed any specific opinion upon it.

750. Are you aware whether there was any discussion at the Board on the subject reported?—I think there was no reported discussion.

751. Mr. *Leeman.*] You said, in answer to a question of the Honourable Member for Lancashire, that at this moment there is an agreement between the Telegraph Companies to make the same charges?—I believe so; we find them uniform in transmitting our messages.

752. On that account you consider the telegraph system a monopoly?—I think so, there are only three companies that we have to deal with.

753. And that you complain of?—No, I do not complain of it.

754. Do you think it works any evil?—I think it keeps up the rates at their present level, when they might very advantageously be reduced.

755. Have you anything to do with the railways?—No, only as a traveller.

756. Do not you know that, at this moment, the same thing exists between every competing Railway Company in the kingdom as to fares and rates: take the London and North Western, the Midland, and the Great Northern, they fix the fares and rates between themselves, instead of competing with each other?—I know that there is a maximum fixed by Parliament.

757. Assume, as the fact is, that the rates and fares are all fixed by arrangement between the companies, would you complain of that?—No; not unless I thought the rates unreasonable.

758. Do you think the telegraph rate of 1 *s.* is unreasonable for 100 miles, for instance?—I think it might be more advantageously put at 1 *s.* for England generally.

759. Do you think that 1 *s.* is an unreasonable thing for 100 miles?—No; 2 *s.* 6 *d.* would not have been unreasonable 20 years ago.

760. I am speaking of now. Do you think 1 *s.* unreasonable for 100 miles?—It would not be unreasonable if it were so; but it is not so, is it?

761. Assume it would be so, would you think it unreasonable?—Perhaps it is not unreasonable.

762. Do you know what the rates are?—I know that we pay 1 *s.* 6 *d.* to London from Manchester, and 1 *s.* to Liverpool.

763. Do you pay more than 1 *s.* for 100 miles from Manchester?—I do not know that we do.

764. You say that, as regards secrecy, you would have no objection to the Government having the telegraph?—No.

765. Do you know anything about the working of telegraphs on the Continent?—No; I know that many of them are in the hands of the Government.

766. Have you ever sent telegrams on the Continent?—Yes.

767. The Director of Telegraphs in France has power over the commercial telegraphs?—Yes.

768. Do you think that your Exchange at Manchester would like that the Government should have a power over your telegraphs, like that which the Government of France now exercises on the Bourse at Paris?—If we thought the English Government would make use of the telegraph in any such way we should object to it; we do not believe it would.

769. Do you know that it is at this moment very largely complained of in France?—In all probability it is.

770. Do you know that the Director of Telegraphs there takes four copies of every telegram that comes through the French system?—I was not aware of that.

771. If you had, would not you have objected?—Undoubtedly.

772. Supposing you had a state of things in England by which the telegraph could be tapped at any point in the country, and the contents of it known to the Government, do you think that would be a state of things that the English people would like?—I apprehend that the facilities for tapping are just as great now as they would be.

773. Not on the part of the Government?—Why should the Government tap?

774. Assuming the Government could?—They would have the power of receiving

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ing communication at the termini; they would not have occasion to tap it on its way.

775. Would you think it objectionable that the Government should have the power of knowing the contents of every telegram if it wished to know it. Would you not think it an objectionable thing that the head of the Government should have the power of getting at the contents of every telegraph that passed through the wires in England if he chose; would you think that a desirable state of things?—If I thought he were wanting to interfere with the telegraph lines in the same sense as Sir James Graham was supposed to have tampered with letters, I should say that that was very wrong.

776. He would have the power by your plan?—Yes, but the question is whether he would use it; he would have the power.

777. Speaking of Manchester generally, do you think that a desirable state of things in this free England?—I think Manchester people are far too sensible to believe that any Post Office we have now-a-days would use the telegraphic communication for improper purposes.

778. You represent here the commercial classes of Manchester?—I am a member of them.

779. You said, in answer to a question of the Honourable Member for London, that you had had no public meetings in Manchester on this subject?—No, I think not.

780. Could you give the Committee any idea of the proportion of the population of Manchester that ever use the telegraph at all?—No, I could not.

781. Do you think that there is more than one in a thousand of the population of Manchester that uses the telegraph from year to year?—Yes, there are more than 400 firms that use it, I should say.

782. Were you aware of the rates that were charged before this agreement that you have referred to was made between the three companies; are you aware of the rates chargeable by the United Kingdom Telegraph Company?—I am not.

783. You do not know that there were many mercantile firms in Manchester and other large towns that were proprietors in the United Kingdom Telegraph Company?—No, I did not know that.

784. Mr. *Graham.*] With reference to the possibility of a betrayal of trust on the part of the Post Office, would it be, in your opinion, a sufficient guarantee to the country against a danger of that sort if such a betrayal of trust by the Post Office were constituted an offence; if the Bill provided by express legislation for the secrecy of those messages in the hands of the Post Office, would that be, to your mind, a sufficient satisfaction to the country against such a thing?—I think so.

785. Mr. *Goschen.*] Were those gentlemen with whom you have communicated on the subject of this Bill, or as to the purchase of the telegraph by the Government, in favour of any loss that might possibly occur, being borne by the Consolidated Fund, or in favour of the telegraphs being self-supporting?—I cannot answer that question.

786. You have communicated a good deal with the mercantile community, as I understand?—I have not communicated with them with a view to give evidence here.

787. You have picked up the general feeling?—Yes.

788. And that general feeling is in favour of the Government taking the telegraphs?—Yes.

789. Does that general feeling go so far as to say that, if not self-supporting, the Government should make up the deficit out of the Consolidated Fund?—I question whether they have ever contemplated that. I think they would have no objection to the loss being borne by the Consolidated Fund for a certain period, believing that ultimately there would be a profit.

790. As regards secrecy in the conveyance of commercial messages, they would rather prefer that the telegraphic communication should be in the hands of Government than in the hands of the directors of a company who may themselves be commercial men?—Yes.

791. Therefore, from a commercial point of view, it might be an additional guarantee if it were in the hands of the Government?—Yes.

792. Would that apply to political information as well?—I think so.

793. Political parties in Manchester would prefer that the Government should have

have the reading of their telegrams than commercial directors?—I should not like to give evidence for political parties; but I should think they would have no objection to that.

794. They would have no objection to their political messages being read by the Government?—No.

795. Mr. *Leeman.*] Not at election times, you think?—That, after all, is a small matter in the question. Elections do not take place every day.

796. Mr. *Goschen.*] Would you say that for commercial purposes they would prefer the Government having the telegraph in their hands, as far as commercial secrecy is concerned, but that, as to political secrecy, there might be something said on the other side?—I dare say there might be; but that would be a temporary difficulty; but the information might be communicated in cipher.

797. Mr. *Turner.*] The directors of private companies are also politicians on both sides, are they not?—Yes.

798. With respect to the question put by the Right Honourable Gentleman the Member for the City of London, would the public in general prefer the Government reading political messages to the directors of private companies reading them, who might be partisans on either side of the question?—I think it pretty nearly balances itself.

799. Mr. *Goschen.*] There might be directors resident at Manchester, but there would not be directors in every post town?—No.

800. Whereas there is a Government official in every post town?—Yes.

[The Witness withdrew.

Professor *William Stanley Jevons*, called in; and Examined by Mr. *Sargood.*

801. You are Professor of Political Economy at a college in Manchester?—At Owen's College.

802. Have you given some attention, personally, to the question of the Post Office having the control of the general telegraphic business of the country?—I have attended a great deal to it the last few years.

803. Is it a scheme of which you personally approve, as far as your means of considering it go?—Distinctly so.

804. Is it a matter that you have brought under the notice of the Statistical Society at Manchester?—Yes, early last year.

805. So far as you can gather, the feeling and opinion of persons at Manchester, is it in favour or against this proposition?—Judging from opinions expressed at the meeting, it was strongly in favour of it; and, I may say, it was two officers of the society who wished me to come here and support the scheme.

806. I suppose, as a statistical man, you have looked into the question of the working of the system of the penny postage and its ultimate results?—Yes.

807. Do you consider that it is fair, reasoning by analogy, to expect that in the case of telegraphic communication similar results would follow?—I think the telegraphic communication is on the same footing as postal communication in almost every point.

808. Is it your opinion that telegraphic communication would increase in quantity in proportion as it was reduced in price?—Yes.

809. Do you consider a uniform rate of charge, as in the penny postage system, an advisable mode?—It is a matter of very great convenience to have a uniform charge, which we have all experienced in the case of the Post Office.

810. On the question of monopoly, I presume that you are not a man who would advocate in the abstract any monopoly of that sort; are there any exceptional points with regard to telegraphy that induce you to think it would be advisable to give the Government the entire control?—I conceive that there are great advantages attaching to monopoly in certain cases, but also very great disadvantages; at present we have neither the advantages of monopoly nor those of free competition; if any change were made for the better, it would resolve itself into a monopoly, and I would rather see that monopoly in the hands of the Government than in the hands of a private company.

811. Amalgamation as the first step in the right direction would produce great benefits to the public in the way of economy?—It would realise the advantages of economy.

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812. With regard to any supposed maladministration, do you think the public would be safer in the hands of the Government than in the hands of private individuals, assuming that there was any maladministration?—I conceive that the public would have much better means of redress, if the system were in the hands of a public department, public opinion being so very sensitive concerning the action of public departments in this country.

813. Is there anything in connection with telegraphy which strikes you as rendering it a subject with which the Government officials and employés would be unable to cope?—I am not aware of any important points; in almost all points I conceive it is a business fitted for the employés of a public department.

814. As to the proposition of increased facilities and carrying telegraphic communication to all the money-order offices, do you think that a thing very much to be desired?—I think it is certainly very much to be desired.

815. As to your own experience, how far off are you from a telegraph office?—The result would be to bring me very much closer than I am at present; in fact, living in the suburbs of Manchester, I feel almost cut off from telegraphic communication when I am at home.

816. How near would you be to a money-order office if the new system were carried out, much nearer than you are now to a telegraph?—At present I am only a few minutes' walk from a money-order office which has been recently opened, on account of the growth of the neighbourhood, but the telegraph offices are about three miles away at the least.

817. If you require telegraphic communication you are put to the extra expense of a special messenger?—Yes, or a journey into town.

818. And considerable loss of time, of course?—Yes.

819. Mr. *Potter.*] Did the Statistical Society present any Petition to this House?—No; no distinct motion was made in the society; there was simply a discussion on it and an expression of views from many of the members.

820. Were any resolutions passed as the result of that discussion?—No distinct resolutions were passed, except that there was an expression of opinion in the speeches of the members; it is not always usual by any means to pass distinct resolutions.

821. Mr. *Goschen.*] Was there much difference of opinion?—As far as I remember there was no difference of opinion, and the principal speakers expressed a very strong concurrence in the scheme.

822. I understood you to say that amalgamation was a step in the right direction amongst the companies?—I mean that amalgamation would realise the unity of management and economy of management which this scheme would realise also, but in a more satisfactory manner.

823. Do you think, generally, the public gains advantages by the amalgamations of great companies?—There is certainly a gain from the economy of management, and there is a certain unity necessary in such a thing as telegraphy.

824. Do you think that there are any counterbalancing disadvantages?—I have heard disadvantages suggested, but I have not felt them to be of great moment myself.

825. You have heard, probably, of the proposed amalgamation of the three great railways in the south of England, and what was likely to happen in consequence?—No.

826. Having turned your attention to these subjects, would not you say that amalgamation leads to higher prices?—It would be pretty sure to do so in the case of a company acquiring a monopoly themselves.

827. Amalgamation is a step towards monopoly?—Yes.

828. And monopoly is a step generally towards higher prices?—In the hands of private persons.

829. The amalgamation of private companies is not always advantageous to the public, but sometimes dangerous?—Certainly; it is primarily done for their private interests.

830. When you said, in answer to a question of the learned counsel, that the amalgamation of the Electric Telegraph Companies would be a step in the right direction, you had simply economy of management in view; but you overlooked the danger of a rise in price?—Yes; I referred to the economy of management,

and

and I thought the same amalgamation might be carried out by a Government department, without the corresponding evil.

831. If there is a loss rather than a gain to the Government in the working of the telegraphs, have you contemplated what is to occur?—I apprehend, with the prudent management which I expect would prevail, that loss would not occur, and if it did occur at all, I think it would be very temporary.

832. You say that probably in ignorance, as the Committee itself is in ignorance of the price which will be paid; how can you tell whether it will pay, till you know what is the price which is going to be given for the telegraphs?—I do not hope to see any very violent reduction effected all at once. I think that if there were a violent reduction, anything corresponding to the penny post, it would entail a certain monetary loss upon the country; but I am not aware that the Post Office intend any very violent reduction of that sort.

833. You have no idea of the amount of reduction which is going to take place; you have not examined that at the Statistical Society?—When I brought it before the society, there was no accurate information as to that.

834. Are you aware what the maximum tariff fixed in the Bill is?—I understand that it is 1 *s.*

835. What would you say was the average rate paid for every telegraphic message sent in the United Kingdom now?—I am not able to form an accurate notion of that, but it is distinctly above 1 *s.*

836. What would you call a violent reduction? if it were decreased by 30 per cent., would you call that a violent reduction?—Certainly not; I should call a reduction to a third of the present price a too sudden reduction.

837. What would you say to a half?—It would require very exact information to say whether that was or not likely to cause a loss.

838. Would you be surprised to hear that every telegram that is sent now costs 1*s.* 11*d.*?—I should not be altogether surprised, but part of that is due to the fact that three great companies are concerned in dividing the business between them.

839. If 1*s.* 11*d.* is the figure, a reduction from 1*s.* 11*d.* to 1*s.* would be nearly 50 per cent.?—Yes, but part of that would be saved in the actual working of the system.

840. Supposing that the reduction to a half did not recoup the Government the expenses in consequence of the very high price which possibly might be paid to the Telegraph Companies, what, in your opinion, as a political economist, ought to be done?—I should not like to see any system carried on at a distinct commercial loss to the country, but I think, as a temporary loss, it perhaps ought not to be condemned as leading to a development of a very important system, ultimately, which might pay before long.

841. You would go on a certain number of years at a loss, trusting that it would recoup itself?—Yes, certainly; tentatively.

842. Supposing there were no chance of its paying?—Then I should be inclined to make it pay.

843. By raising the rates?—Or by some means to make it pay.

844. Would you make it pay by curtailing the accommodation, or by raising the rates; would you curtail the accommodation by doing away with unremunerative districts in the country where the loss was, or would you raise the rates in towns?—Any very unremunerative part of the business I should certainly not be inclined to carry on.

845. If you found in certain districts it was causing a loss, you would be inclined to do away with those parts of the business?—Yes. I am not in favour of supporting communications which really do not pay.

846. However, the electric telegraph business is very analogous to the Post Office, is it not?—In many respects.

847. Are you aware that there are post office districts that do not pay at all?—No doubt there may be some, but as a general rule I have heard that applicants for new post offices are informed that they must show that there is a sufficient amount of business to warrant the opening of an office.

848. I think you will find that there are many places where the 1*d.* does not pay; would you make in your telegraph business the populous places pay for the thinly-populated districts, or would you rely upon an average?—It is a somewhat difficult thing to say how far that should be done; but I think that the

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the sounder principle is to make each communication pay, but in developing business I do not know that that rule should always be rigidly carried out.

849. If you make each district pay, you cannot have a uniform rate, can you?—No; I said that the uniform rate was a matter of public convenience.

850. Do you think that a uniform rate is an important part of the scheme?—By no means a necessary part; I think, in that respect, the telegraphs stand upon a somewhat different footing from the Post Office, where uniformity is supportable upon every ground. I do not think that uniformity is equally a part of this scheme.

851. Would you be in favour of a legal monopoly, or of a practical monopoly?—I should be against a legal monopoly; I think there is no need for it, and there are many reasons against it.

852. You see no argument in favour of a legal monopoly?—None at all, that I am aware of, and many against it.

853. Would you acknowledge this as a sound argument that, supposing you had a uniform rate, unless you had a legal monopoly, a private company could come and take away the best part of your business, and leave you the unremunerative part; how would you protect yourself against that?—I would not protect myself by monopoly; I would rather re-arrange the rates.

854. You would depart then from the uniform system?—Yes, which I do not consider an essential part of the scheme.

855. Is it not the fact that a uniform rate must almost always lead to a legal monopoly, if the exchequer is to be protected?—Very likely; and that is what occurs in the case of the Post Office now.

856. Mr. *Turner.*] If there is no legal monopoly, the practical monopoly only arises from the Government doing the work cheaper and better than private companies?—Certainly.

857. Inasmuch as they can compete?—Yes; they have possession of a great system already at work.

858. Have they not, in your opinion, such advantages as would enable them to work the telegraph more economically than any private company could possibly work it?—I think so; that if it is as cleverly managed as it is likely to be, it will have no need to fear private competition.

859. That being the case, and it being desirable that the public should have their work done as efficiently and cheaply as possible, you are desirous that the telegraphic system should be put into the hands of the Government?—Yes.

860. Mr. *Leeman.*] The same reason would induce you to ask that the railways should be put into the hands of the Government, would not it?—I have thought a good deal about that, and I think it does not extend to railways in an equal degree, on account of the immense property and the very complicated nature of railway business.

861. Do you know anything of the complications which exist between the Telegraph Companies and the Railway Companies?—Yes, I have heard that there are a great many agreements.

862. Would not those complications and difficulties be very much of the same character as exist in railways?—They seem capable of very easy arrangements; I mean as to what part of the railways should take in the management of the telegraphs, and what part the Post Office should take.

863. Why should there be any more difficulty with regard to railways being put into the hands of the Government?—In railways there is a vast amount of property of all sorts and kinds.

864. Then it is only in degree, it is only in point of amount that you would see the difficulty?—Yes, precisely, it is a question of degree; but the difficulties are very much greater in the case of railways than in this case.

865. Will you give us a few of them?—The difficulties are somewhat to be measured by the comparative amounts of capital invested.

866. How does that affect the question of working?—The management of many millions of fixed property is a matter of great difficulty and requires great discretion, and is a totally different matter from the regulation of a staff of officers.

867. The staff of the Railway Company is pretty much the same as the staff of a Telegraph Company, is it not?—Yes.

868. Where is the difference in principle between the staff of a Railway Company being handed over to the Government and the staff of an existing Telegraph Company

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Company being handed over to them?—I did not refer to the staffs of officers; in that respect it is much the same, but a great Railway Company has enormous works of every kind, it goes into various branches of manufactures.

869. Have not the Telegraph Companies large works, too?—It is not essential. Part of the undertaking of the Telegraph Companies with the railways as I understand is that the Railway Companies shall maintain the wires as they already maintain their own wires.

870. You are against amalgamation generally, as I understand you, as a principle?—I am opposed to it so far as it throws a monopoly into the hands of private individuals, which may be misused by them.

871. That is an objection which you would have, would you not, to the amalgamation of railways?—Certainly, unless very careful regulations were made by the Government authorities.

872. By Parliament?—By Parliament.

873. Take your own district; have you not two very large monopolies in railways existing at present; is not the Lancashire and Yorkshire amalgamation an amalgamation of about 20 different companies under regulations made by Parliament?—Yes, as far as I am aware.

874. Take the London and North Western Railway which also comes to Manchester; is not that an amalgamation of a very large number of Railway Companies, an amalgamation regulated by Parliament?—I believe so.

875. The Great Western Railway, is not that an amalgamation of a very large number of companies again regulated by Parliament?—Yes.

876. Is not the North Eastern the same?—Yes.

877. The Great Eastern?—Yes.

878. All monopolies, in your sense of the word?—Yes.

879. Where would have been the difficulty, do you think, in an amalgamation of the three Telegraph Companies regulated by Parliament?—I think that the kind of regulation to which you refer is of a very imperfect character, and that in the case of the railways it is not able to overcome the injustice and difficulty which often arise; the Railway Companies are able to raise their rates and to inflict a tax upon any town they like so long as they do it within the Parliamentary limits.

880. Do you not know that Parliament has heard all that, and has gone on amalgamating up to the very last Session of Parliament for 15 years?—It has done that because there are advantages in that amalgamation which counterbalance the inconveniences.

881. Why should there not be the same advantages in an amalgamation of these three Telegraph Companies?—There would be the advantages of economy, but it would throw a complete monopoly into private individual's hands.

882. That is the same monopoly that you have now at work in all the amalgamations of railways?—Yes, but I think that monopoly is a very great difficulty.

883. Then you think that Parliament has been wrong during those 15 years in pursuing that principle?—If I saw my way out of it to avoid monopoly I should be very glad.

884. Do you mean that the people of Lancashire would at this moment be in favour of reducing their railways to their original elements?—Certainly not, because it would bring great inconveniences; but many persons advocate the Government taking the railways, because it would do away with many injustices.

885. As I understand you, the Statistical Society at Manchester asked that there should be an inquiry by a Commission?—I am not aware; I said that the subject was so very plain, that I thought it ought to be carried out at once.

886. You did not agree that it should be inquired into by a Royal Commission?—I thought there was no need of further inquiry.

887. Of what is the Statistical Society of Manchester composed?—It is composed of a number of men of position in Manchester.

888. Mercantile men?—Most of them mercantile men, nearly all.

889. You do not use the telegraph yourself much, I imagine?—Very rarely; I am not in a convenient position to do so, living in the suburbs.

[The Witness withdrew.

Richard Spelman Culley, Esq., called in; and Examined by Mr. *Sargood*.

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890. You are, I believe, Engineer in Chief to the Electric and International Telegraph Company?—I am.

891. Have you been for 22 years connected with that company?—Yes.

892. I believe you have read with a little interest the question put by Mr. Hope Scott, in his cross-examination of Mr. Scudamore, at Question 326, speaking of the telegraph wires, in which he says, "Suppose it goes into the office of the porter at the Treasury, would not that porter have the opportunity of reading every message sent over the whole wire?" I ask you, in answer to that, as a practical man, is the system of telegraphy at this moment open to anything so obnoxious as that?—Any person who has a telegraphic instrument on any single wire can read what passes through that wire, provided he can read the telegraph, but he must be a telegraphist of more than usual ability; it would be more difficult to read a message in that manner; he would want a clerk to be watching the instrument continuously, otherwise he would not know when the message began and when it finished; he would have to catch it, in fact, as it ran (unless he were watching continuously), beginning perhaps in the middle of a word. Persons can do that, but it would be so difficult that I am sure the porter at the Treasury could not do it.

893. If a clever manipulator were employed, it would involve two things; first, that he must have an instrument peculiarly adapted to the work, and next he must attach the particular wire on which the message was travelling?—Yes.

894. Without a combination of those two things there would be no reading off?—No; if a message were expected from Manchester or Liverpool, all the Manchester and Liverpool wires would require to be led into the central office. I do not know how many wires they would be; I do not suppose less than a dozen wires. The Chancellor of the Exchequer, if it is to be supposed that any Chancellor of the Exchequer would do such a thing, must first know on which of each of those dozen wires this particular message was coming; he must have his private wire connected, with the knowledge of the Post Office, and with the knowledge also of the clerks employed in the central office. If he knew on what wire it was coming, if the clerks or officials at the central office connected his wire to that wire, and if he had a very experienced clerk at his office to read all the messages, he could then read all the messages that came, but under no other circumstances.

895. That is saying that, by a very dishonest combination, a message transmitted by a wire might be read in its transit?—Yes, as can be done now.

896. Is there any reason to suppose that a change of administration would facilitate that operation, or otherwise?—None whatever; it would be too dangerous a thing to do; you would be in the power of all the office.

897. The administration in the hands of the Government would not be more open to that abuse than it would be in the hands of private individuals?—No; unless it was a very corrupt administration.

898. When I used the word "administration," I was not alluding to the Government, but to the administration of the system?—The administration must be very corrupt for such a thing to be done; it never has been done, even for share-broking or racing purposes, where the temptation to do such things is greatest.

899. You say that an instrument adapted to the particular purpose would be required; you mean an instrument corresponding to the one being worked?—Yes.

900. And as many instruments are employed, you must not only surreptitiously give knowledge of the wire that is being used, but of the instrument that is being used?—Yes.

901. In order to intercept messages in that way, the Government office must be charged with every species of instrument known, in order to be ready for the operation?—The way to do it would be this, to have a duplicate central office at the Home Office, to have 150 instruments, and 150 clerks there, all of the very highest capacity, and unless they read messages beginning in the middle of a word, they would require to be continuously at work without intermission for the whole day.

902. *Chairman.*]

902. *Chairman.*] I suppose there would be no facilities for such an operation that do not exist now?—None whatever.

903. Practically, within your knowledge it has never happened?—No, it would be too dangerous a thing to do.

904. And you think there is not any possibility of such a thing being carried out in practice?—I think not.

905. Mr. *Goschen.*] In what way do you mean too dangerous?—I mean that any person who ordered such a thing to be done would put himself in the power of too many people, some one would be sure to mention it.

906. Is telegraphy now a science which is rapidly advancing?—Yes.

907. Discoveries are being made continually in electric science?—Yes.

908. New processes are being continually discovered?—Yes.

909. Does not that cause a fluctuation in the value of existing processes?—A process has no value beyond the cost of the instrument which you work it with; for instance, the needle instrument has given way very much to the Morse instrument; therefore there has been an alteration in the process; that has simply lowered the value of the needle instrument, it has done nothing more.

910. You say that a process has no value, but if a patent is taken out for a process it has a value, has it not?—Yes, so far it has a value.

911. What I mean is this: is not it possible that discoveries may be made which may affect the value of telegraph property?—If that property consisted entirely of patents it would, certainly; but the property does not, so far as I know, consist of patents. There is very little money, so far as I am aware, laid out in patents; there are patents that have cost large sums, but those patents have run out; there are no patents now running worth a very large sum.

912. What does the property consist of?—Poles, wires, and instruments.

913. I take it that the Telegraph Companies would be very much dissatisfied if they were only to get the value of their poles and wires?—Yes, there is the property in the business.

914. The goodwill?—Yes.

915. And the goodwill depends upon the process employed, does it not?—Not upon any particular process, I think.

916. I mean the goodwill arises from conducting telegraphy business in a certain way?—I think it arises from the companies being able to send messages with speed and accuracy, and from doing the business in this way or that.

917. If another company discovered a quicker and better process, the present companies' property would be depreciated at once, would it not?—Only so far as this, that the new apparatus must be of sufficient capacity to do more work with, say, half a dozen wires than the present companies do with a very much larger number; you may use a slow process, but if you have plenty of instruments you do as much work as by using a quicker process with a less number of instruments.

918. Supposing the Government buy an electric telegraph business conducted with a very large number of wires, and supposing to-morrow you discover a process by which you can dispense with half those wires, then the Government has bought half of those wires uselessly, has not it?—Obviously.

919. Then the Government is buying property which, by the rapid advance of telegraphic science which is taking place, may become depreciated from day to day?—No, I think not. If, say, six times the work could be done for the same expense, the natural course would be this, to lower the price, and so give the public the advantage of it. If it were possible to invent an instrument that should do fifty times the work, we might have a universal penny rate. I fancy that must be the intention of the Post Office, to lower the rate as far as it can, not to throw the wires out of work which it has bought, in order to keep up the shilling rate.

920. The point is this, that if a new process like that were discovered by which the work could be done more cheaply, you might have a new company started that could construct its plant and make its arrangements at half the expense of the present companies?—Yes, but the plant exists, and therefore it could be used for lowering the rates.

921. The Government in that case would have bought something costing a great deal, it having been constructed before the discovery was made; whereas, if they had waited, they might have bought a much cheaper system?—If they had

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had waited long enough, till the system was discovered: a patent has been taken out for working without wires; if the Government purchased that, they might be independent of the railways and Telegraph Companies altogether.

922. If such a discovery were made and were capable of being worked, the 5,000,000 *l.*, or whatever may be the price to be paid for buying up the existing companies, would be thrown into the sea?—If the Government purchased such an invention, and it were workable, the working of the existing system might be broken off at once.

923. Do you think that the question of goodwill is affected when a rapidly advancing science is constantly discovering something that may modify the value of that goodwill?—No, I think not; I think the Government scarcely wishes at present to have it understood that private enterprise is to bring out new inventions and to prove that they are useful without Government help; I mean private enterprise is to take the initiative in everything new at its own risk, and that the Government shall have the power, if they find that an invention answers, of purchasing it simply at the lowest price they possibly can; I think no inventions would be brought out on those terms.

924. It is possible, is it not, that a new Telegraph Company might be started to-morrow?—Yes.

925. That is a competition to which Telegraph Companies are continually exposed?—Certainly.

926. But notwithstanding that there is a competition, the companies are going to sell their property now as if they had got a monopoly?—I am not sufficiently conversant with the transaction to give evidence upon that point.

927. Mr. *Turner.*] Looking at the prospects of telegraphic business, do you think that it is more advantageous to the public that the Government should purchase the telegraphs now or wait till a future period?—As far as my own opinion goes, the sooner they purchase them the better. If any new great discovery were made we should lower the price to the public; we should establish a firmer hold upon the public, and I do not think the Government then would be able to give the public the advantage it can now.

928. Whatever the price to be paid for the telegraphs now may be, and whatever may be the prospects of future discoveries, still, as a scientific man acquainted with the subject, you think it more desirable in the interests of the public that Government should purchase the telegraphs now, rather than wait till a future period?—I think so.

929. Mr. *Goschen.*] The value of the property is just now at a very convenient point to sell at, is it not?—If the Government had bought the telegraphs 20 years ago they would have bought them much cheaper than now, though there were many more new discoveries to come.

930. Mr. *Turner.*] If they wait 15 years longer they will have much more to pay in proportion?—I think they would have much more difficulty in obtaining the consent of the country to the purchase of them. I think the Chambers of Commerce, who have been the great movers in this, merely wished to lower the price; and, as the Chambers of Commerce ran no risk, they had no objection to the Government trying, at their own risk, to cheapen the telegraph to them.

931. *Chairman.*] The value of commercial property will depend upon the surplus revenue over and above the working expenses?—Yes.

932. Supposing any invention were discovered which would lower the working expenses, it would greatly increase the value of the property?—Certainly it would.

933. If the Government purchased this property upon a calculation of profits under heavy working expenses, and afterwards a discovery were made by which they could considerably reduce those working expenses, they would have made a very good bargain, would they not?—I think so.

934. I take it, from what you have said, that it is your opinion that no system is likely to come into use within a comparatively short time that would dispense with the use of posts and wires?—I do not think it is possible; in fact, I know it is impossible.

935. So that, then, what you would anticipate would be an improved process with the use of the same means of communication you have now?—Exactly so.

936. With regard to the competition that is to be expected by the existing companies, supposing the Government to purchase the telegraphs, can you tell us

us how many years it is since a large Telegraph Company was started?—The United Kingdom Telegraph Company was the last large company that was started; that was started six or seven years ago, I think.

937. Before that, do you know which company was started?—The Magnetic Telegraph Company was the last.

938. How many years was that started before the United Kingdom Telegraph Company?—It would be about 15 years ago, I think.

939. Do you know whether there have been any schemes lately for starting any companies in competition with the existing companies?—No.

940. If that is the case, you think the companies are tolerably safe from the competition of new companies?—I think they are; I think the present companies can beat off a new company; in fact, I think it would be difficult to raise one.

941. Supposing any new invention is discovered, the effect of which would be to greatly reduce the cost of working telegraph lines, do you think any company would have an equal advantage with the Government in purchasing such new invention?—I think the Government would have an advantage over a company; it would be to the advantage of the Government to purchase that invention.

942. You do not anticipate any hurtful competition on the part of any company against the Government; I mean by means of the purchase of a patent for working at a cheaper rate?—I think not.

943. Mr. *Leeman.*] You have been engineer to the Electric Telegraph Company from its commencement almost?—I have been an engineer, but not engineer in chief.

944. Who has been your engineer in chief?—Mr. Hatcher.

945. Have you been engineer in chief recently?—For two and a half years; I have been senior district superintendent for many years.

946. Have you seen the statement by your company in answer to the Post Office statement?—Yes, I have seen it.

947. Were you consulted upon it before it was put out?—No.

948. You know it is a statement of the case of the Electric Telegraph Company?—Yes.

949. Did you read it carefully through?—I read it through. I should not be able to give an answer, perhaps, as to its contents.

950. Speaking of it generally, did you agree in the correctness of its statements?—Generally, yes.

951. Do you know whether Mr. Grimstone is to be examined?—I do not.

Mr. *Sargood.*] I cannot answer whether the companies intend to call him.

Mr. *Leeman.*] Do the Promoters intend to call him, or to call any gentleman from the companies?

Mr. *Sargood.*] As at present advised, I do not know of anyone.

952. Mr. *Leeman.*] For 22 years you have been, more or less, advising the company?—Yes.

953. Is this statement true, that "The Electric and International Telegraph Company has made steady and continuous progress, as regards the extension of its wires and the addition to the number of its stations"?—It is.

954. Is this true: "It has endeavoured to leave no place unoccupied to which there is the slightest prospect of conveying wires with advantage"?—It has always been our custom to extend the wires to every place where we thought we should not lose.

955. "Whenever the working expenses have been met, the Electric and International Company have always been inclined to make extensions and establish telegraph offices, without respect to the numerical population of the small towns or villages in which telegraphs were established"?—Whenever the working expenses would be met they have been.

956. "Very frequently the company has opened stations in districts where there appeared no great probability of obtaining business, upon the representation

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of neighbouring gentlemen and residents that they desired to have a telegraph"?—Yes.

957. "There have actually been cases of offices opened in places where the average return has not amounted to more than 10 *d.* or 1 *s.* per week, and where after a six or twelve months' trial the stations have had to be closed in consequence of the absence or infrequency of messages"?—Yes, there have been cases; I cannot speak exactly as to the sum.

958. Speaking generally, that statement is true?—Generally it is true.

959. "To allege, therefore, that 'many important districts of the United Kingdom are without means of telegraphic communication' is an absolute misrepresentation of fact"; do you agree in that?—I think we have not left any station at which there was a chance of getting an income after considering the cost of extending and putting up the telegraphs. There are many stations which would pay if there were a railway, or if there were a telegraph passing near leading to some other place which would not pay for a special telegraph.

960. What, upon the average, is the cost per mile of telegraph posts and wires, say for two wires?—£. 23 or 24 *l.* a mile, to do the work properly; more in some cases, and in some cases less.

961. May we take it that it would cost, upon the average, 25 *l.* a mile for a telegraph to be taken into a district where telegraphs do not now exist?—It would cost more than that on roads.

962. You take it over a line of railway at that price?—Yes.

963. What would it cost upon roads?—We have had very little experience in roads except in Ireland, where the telegraphs certainly have cost more than that; I am not prepared to say what they did cost.

964. Did they cost 30 *l.* a mile?—I daresay they may have cost, at all events, more than 25 *l.*

965. In most parts of England where a railway now goes, telegraph posts and wires exist?—There is a telegraph on most lines of railway, or almost all.

966. So that any new telegraph to be put up will either be upon the roads, or upon new branch railways?—They must be on the roads, partly; but in speaking of new stations, I presume they would extend from the nearest railway.

967. Were you here on Friday?—No.

968. Do you know the district of Scotland towards Wick?—I know the nature of the country; I have been no nearer to Wick than Inverness.

969. Do you think that it would take 30 *l.* a mile to put up a telegraph along that coast?—I think it would, to use sound seasoned timber and the very best wire, but it might be put up very much cheaper.

970. Supposing you were putting up a telegraph for your own company now; looking at the perishable nature of the materials, you would go to the expense you are now speaking of?—Yes.

971. Is this true: "The progress of the Electric and International Company has been gradual, but it has never flagged"?—Yes.

972. "Whenever the position and finance of the company permitted, it has extended its operations, and at no period has it ever considered its work completed"?—That is so.

973. Does that (*handing a Paper to the Witness*) represent the extensions as they have gone on from 1850, to the present time?—This was made up in my office; it is quite correct.

[*The same was handed in, and read as follows*:]

EXTENSIONS of the COMPANY'S System.

DATE.	Miles of Line.	Miles of Wire.	No. of Instruments.
December 1850 - - -	1,786	7,206	—
„ 1851 - - -	2,122	10,650	—
„ 1852 - - -	3,709	18,545	—
„ 1853 - - -	4,409	21,315	—
„ 1854 - - -	4,954	24,304	—
„ 1855 - - -	5,228	27,989	2,603
„ 1856 - - -	5,398	28,627	2,774
„ 1857 - - -	5,637	29,498	2,938
„ 1858 - - -	6,103	30,733	3,024
„ 1859 - - -	6,272	31,346	3,194
„ 1860 - - -	6,541	32,148	3,352
„ 1861 - - -	6,727	32,787	3,529
„ 1862 - - -	7,597	35,066	4,003
„ 1863 - - -	8,230	39,042	4,489
„ 1864 - - -	8,659	41,592	5,136
„ 1865 - - -	9,306	45,044	5,778
„ 1866 - - -	9,740	47,572	6,491
„ 1867 - - -	10,007	49,619	7,245

974. With regard to dispatch in the transmission of messages along the wires, is this true? "The Electric and International Company have lost no opportunity of endeavouring to secure the utmost dispatch in the transmission of messages along their wires. They have expended very large sums of money to secure this object. It has been their rule whenever an improvement has been suggested to them to experiment upon it, and every real improvement has been adopted with the greatest alacrity whether in the construction of lines, in insulation, or in the adoption of improved processes or instruments"?—Yes, certainly to the best of our knowledge and the best of our ability.

975. Has that been going on since the year 1851?—Yes.

976. If it be said that the company have been behindhand in trying experiments or adopting any invention whenever they have been shown to be improvements, is that true?—I think not; I am sure it is not.

977. Do you agree in this; "The result of all these adaptations has been to make the English system of telegraphy the most perfect in the world"?—There is no better system, certainly no faster, it is imperfect but I think there is no better.

978. You spoke of your having heard of some invention which might in your view reduce the rate ultimately to even 1 *d.*?—I have heard that such an invention has been patented; I have seen the patent but I cannot understand how any sane man could believe that it could be worked; I know of course that the system is useless; I think there must have been other reasons for taking out that patent besides what appears on the surface; I think it is an absurdity.

979. You think that could never be worked?—Certainly not.

 980. Supposing

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980. Supposing that such an improvement in telegraphy were to turn up, I suppose it is as open to a private individual or company to purchase that as to the Government?—Quite, there is nothing limiting the purchase, of course.

981. Can you give us an idea of what the actual amount is that the Telegraph Companies have spent in their present apparatus?—No, I cannot say; it is a very large sum.

982. What has it cost your own company to put up the telegraphs, I mean the actual apparatus?—I do not think that I understand your former question.

983. Can you tell us about what sum of money has been laid out by the Telegraph Companies in the mere apparatus now forming the telegraphic system of the country?—No, I could give you no idea worth having.

984. Could you give an idea what it has been in the case of your own company?—No.

985. I have asked you with regard to the cost it would be to extend the telegraph in the northern part of Scotland, and you say you think in that particular district it might amount to 30 *l.* a mile?—Yes, to do it as I should do it.

986. I believe inquiries were made last year by your own company in different districts into which it had been suggested you might extend telegraphs. I will read you this:—"In the course of last autumn the Electric and International Telegraph Company caused lists to be prepared of all the parishes and places in Great Britain having upwards of 1,500 inhabitants which were unprovided with telegraphic communication. The whole of the parishes and districts with 1,500 inhabitants and upwards, numbered not 10,000, or even 5,000, but only 1,391," is that so?—I do not know of my own knowledge that inquiry was not made through me. I know the means that were taken to get at that information.

987. You know that careful means were adopted by your company for the purpose of obtaining information?—Yes, the best means at our disposal. Inquiries were made through each district.

988. Was this circular sent from the secretary of your company to the superintendents of the different districts:—"Attached is a list of places in your district containing 1,500 inhabitants and upwards, at which there are at present no telegraph stations. I wish you to go carefully through the list and to report upon any places at which you may consider it desirable to open stations"?—Yes.

989. Are these samples of the replies from the superintendent of the western district: "I have gone very carefully through the list returned herewith, and have also obtained reports from the various inspectors and principal clerks in charge. The result is, that I am unable to name a single place at which it would be desirable to open a telegraph station. A very large proportion of the places named are within a mile or so of stations already; so near, indeed, that it would be ridiculous to open others; in other cases the hamlets and parishes named in your list are, in fact, places with miles of huts and cottages, the inmates of which are quite innocent of the telegraph and its use"?—That was the opinion of the superintendent of that district.

990. Let us take the opinion of the superintendent of the south-western district: "Most of the places are small rural districts of great extent, where the inhabitants are much scattered (I have marked such places as 'scattered'); others are small agricultural towns, from which we should probably get one message a month (I have marked them as 'unimportant'); other places are already served by our existing offices, which are really nearer than the distances given. For instance, our 'Salisbury' office is in 'Fisherton Anger' parish." Is that the answer you got from the superintendent of the south-western district?—I have not the slightest doubt that it is.

991. *Chairman.*] Do you pledge yourself to any knowledge upon these matters?—I do not.

992. You know no more about them than reading them as the statements of the persons whose statements they professed to be?—I know the men who gave them, but those statements are all from our point of view, assuming that we must make a profit. It might be useful to open those offices if we did not care about benefit. The statements must be taken with that qualification.

993. Mr. *Leeman.*] Take the next, from the superintendent of the northern district: "There are none at which it is desirable to open stations, or at any rate, at which any outlay for the purpose could be recommended. I have returned the lists fully noted. A large part of the places named are large parishes with a widely

widely scattered population, and without any centre of importance. Other places (and those the largest) are really parts of great towns, at present amply supplied with telegraph stations, but which, constituting distinct parishes, are shown separately in census returns." Is that another of your returns?—Yes, that is another. I have no personal knowledge myself of those.

994. But you have told us that you know the mode in which this information was obtained?—I know the mode, that is to say, writing to the superintendents and getting their opinions. I do not know the mode in which they got up the information upon which their statements are founded.

995. Is this true? "The great bulk of the stations of the Electric and International Telegraph Company only collect 9 per cent. of its gross receipts"?—I know nothing about that of my own personal knowledge, I am not connected with the commercial department; of course I hear about such matters, but I do not know them of my own personal knowledge.

996. With regard to your charges, have you gone on reducing the rates of charge for messages year by year, at least at different periods during the last 15 years?—Yes, we have.

997. And have those reductions gone on so that you now last year got the rates down to 1 *s.* for 100 miles, 1 *s.* 6 *d.* for 200, and all above 200 miles, 2 *s.*?—Yes, for Great Britain.

998. With regard to Great Britain the charge is what I have said?—A message from Penzance to Inverness is 2 *s.*

999. That would be how many miles?—700 or 800.

1000. Do you remember the United Kingdom Company being commenced?—Yes.

1001. The United Kingdom Company came out with a very flaming prospectus, in which it was stated that it was going to reduce the rates to 1 *s.*?—It came out on the base of a uniform 1 *s.* tariff.

1002. The same plan as the Post Office now propose?—Yes, so far.

1003. As far as price went it was at the same figure as now proposed by the Post Office?—Yes.

Mr. *Rodwell* was heard to state that inasmuch as he would not have an opportunity of re-examining the witnesses on their examination by a Member of the Committee, which examination, if the opponents had not temporarily retired from the room, would probably have been conducted by the Counsel for the opponents, and so have given him, Mr. Rodwell, the right of re-examination, he for the future, with the permission of the Committee, would merely tender witnesses for examination by the Committee, taking no part in the examination himself.

The Committee deliberated.

The *Chairman* stated that at the conclusion of the examination of this witness the Committee would examine the witnesses themselves.

1004. Mr. *Leeman.*] The shilling did not pay the United Kingdom Company?—It did not pay.

1005. How many years did the United Kingdom Company continue to pay no dividend?—I am not a shareholder, I really do not know.

1006. As engineer of the other company you know, do you not?—Not with certainty.

1007. Do you believe that a 1 *s.* rate would be remunerative?—After a time it would, not immediately.

1008. How long would it be, do you think, before it was remunerative?—Perhaps a couple of years.

1009. Upon what capital?—I mean it would be remunerative to our company, for instance. I fancy it is merely my own opinion.

1010. Upon what you have spent?—Yes.

1011. It would take two years, would it, to be remunerative to you, upon what you have already spent?—I should think that my opinion would be no evidence upon that point, but my idea is that it would.

1012. And not earlier?—I do not think it would.

1013. What is the amount your company has spent?—It is not very far from a million of money.

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1014. Then, upon a million, in two years you think a 1 *s.* uniform rate would pay your company?—Yes.

1015. Would that be your opinion also with regard to the other two companies?—I fancy so; but my opinion upon that point is nearly valueless. I think on these points I could give the Committee no information really worth having. I can only say what I think.

1016. Do you see any reason to doubt that the view you have expressed, that it would take two years to pay your company, at 1 *s.* upon a million, would apply also to the other two companies?—It is a question so entirely out of my way that I can hardly answer it.

1017. Supposing your company had a capital of 2,000,000 *l.*, how soon do you think it would pay at a 1 *s.* rate?—That is a question rather for an accountant than myself; it is useless my saying what I imagine in such cases. I am not accustomed to such inquiries.

1018. You have told us that you do not see any difficulty with regard to the preservation of secrecy, as I understand you?—No, there never has been any difficulty; it is a matter of the honour of the Government.

1019. Do you know that your company complain of the mode in which the telegraphs are worked on the Continent?—I do not.

1020. You said that you went through this document?—Yes; I do not remember all that is in it.

1021. Listen to this; "In Spain, under Marshal Narvaez and Senor Gonzales Bravo, no telegram on any particular matter is allowed to pass out of Madrid without having been first subjected to the inspection and confirmation of the Minister of the Interior (who of course takes his own time to make his inspection and consider the propriety of sending it;)" do you know that that is the mode in which the telegraph is worked there?—No, I do not know anything about it.

1022. Do you happen to know that the censorship of telegraphic correspondence is exercised by other continental Governments as well as Spain?—I know that the Governments frequently read messages; we are told that; it is a matter of common report. I know nothing more than that; I know nothing officially, and I have no means of knowing more than you.

1023. But as a gentleman connected a good deal with the working of telegraphs you have heard, have you not, that the foreign Governments do exercise a censorship over the telegraph?—I do not think that my position would enable me to know that.

1024. Have you ever heard of it?—I have heard of it; but a man of business sending telegrams should know more about it than we who know nothing about it.

1025. Do you know that the Director of Telegraphs in France has four copies of each telegram made?—I have heard it stated so in this room.

1026. And that those are sent to the different departments which may be affected?—I know nothing of that of my own knowledge.

1027. Have you heard this, that "The authorities of the Bourse in Paris have opportunities of seeing every telegram which reaches or leaves that city on matters relating to Stock Exchange operations"?—That pamphlet says so; I know nothing about that; I have no means of gaining information upon this point at all.

[The Witness withdrew.

Mr. *Scudamore* handed in a copy of the correspondence with foreign countries. (*Vide* Appendix.)

Sir *Charles Wheatstone*; Examined.

Sir *C. Wheatstone.*

1028. *Chairman.*] You have made the telegraph, as we know, your peculiar study?—I have.

1029. And you have been a very successful inventor in telegraphy, have you not?—I have made many very useful inventions.

1030. Will you give us your opinion as to the desirability of the telegraphy for the railway and the telegraphy for the public being conducted upon the same wires, or upon different wires?—My opinion is, that the railway system and the telegraphic

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telegraphic system generally should never be mingled together. It has been necessary, perhaps, in the present state of imperfect development of the telegraph to do so now and then; but in my opinion the telegraphic system will never be complete until there is a total separation between the two interests, and the only agreement which should hereafter exist between the Government and the railway companies should be for way-leaves for the right of placing wires upon their lines.

1031. Do you wish to see that separation for the sake of the railway, or for the sake of the public?—For the sake of the public; I believe that most of the complaints that have been made in the public papers, have arisen from the necessary delays of messages in consequence of the lines being required for the purposes of the railway.

1032. The railway messages having the priority, probably the messages of the public have been delayed in order to give them that priority?—That has been so in many cases.

1033. Then, supposing that there are separate wires for the use of the Railway Companies, the railway lines can be worked with perfect safety, notwithstanding the Government using the other wires upon the same posts?—With perfect safety, and with greater safety I should say.

1034. Have you considered the question of giving the Government the opportunity of reading all the messages that are sent by the public along the wires, if they should fall into the hands of the Post Office?—I should think that no more danger could be apprehended from the telegraphs being in the hands of the Government, than in the hands of private companies.

1035. Do you think that there would be as great or greater security against secrecy being violated, if the matter is in the hands of the Government?—I think that there would be greater security, on account of reasons which I will shortly mention. At present ciphers are very little employed by the public, and if they were employed, I believe that many messages which now are not sent, would be sent by the telegraph lines; and if the Post Office were to issue instructions by which the public might be put into possession of what ciphers they might use, and the security depended upon them, I think that almost any persons of ordinary intelligence, would be able to send their communications by cipher, which they do not now.

1036. At present do the Telegraph Companies charge a greater rate for cipher messages?—I believe they do, in consequence of the greater care that is requisite at present in their transmission.

1037. If a cipher of universal use could be devised, or has been devised, that would at all events prevent any violation of secrecy?—Completely so; and it is in any person's power to render the discovery of his messages impossible.

1038. Are you prepared to explain to the Committee what your system is?—There are many systems which I should recommend; one would be that the Post Office should issue instructions containing the most approved system. But there is one system which I have paid particular attention to myself, which has been employed by Her Majesty, and employed by the Emperor of the French, and also employed by the police here; and if you were to call the Superintendent of Scotland-yard before you, he could give you some very useful information with regard to the facilities with which communications can be made.

1039. Are you prepared to state to the Committee what that system is?—Yes. I will first hand in this paper of instructions (*delivering in the same*, vide *Appendix*); this is a little instrument which is employed by the police (*producing the same*).

1040. Is that what is called the A. B. C. instrument?—No; it is called the Cryptograph. Ciphers have been very frequently employed upon the public papers, but they have proved to be so very insecure that I believe for several years past none have appeared, and that is the reason why the public are not acquainted at present with what cipher they may use with safety. This instrument has two circles, an outer one and an inner one; the outer circle has 27 divisions, containing the letters of the alphabet and a blank; the internal circle has only 26 spaces, and they contain the letters of the alphabet in permutated order; and that permutated alphabet constitutes the cipher, which would be different according to the different persons you correspond with. These ciphers, which a great many people employ, are simple cases of the substitution of one

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letter of the alphabet for another, but ciphers of that kind are very easily deciphered. In consequence of the unequal number of the divisions in those two circles, when this hand makes one revolution, the internal hand, the smaller hand, advances one step, so that in working the cryptograph the same letter of a despatch may be indifferently represented by any letter of the alphabet; so that the cipher is continually changing, not according to any mathematical rule, but according to the number of messages that you are sending. And there is another security. One of the means by which the cipher is readily deciphered is the division of the words by blanks between them, but each of the blanks is treated as a letter, so that a letter always represents a blank, and the communication goes on as in the paper which I have handed in, so that there is no apparent division between the words.

1041. May we take it that this pamphlet explains the system?—It explains how to use the instrument. It does not describe the instrument, but gives instructions how to use it. The advantage of this cipher is that all the world may know the principle without being able to discover any individual cipher. The principle is of universal application, and each person can have his own key to the secret. There is another important thing with regard to a cipher, the facilities with which the key can be reproduced or remembered. That is a general difficulty with regard to a cipher, and that difficulty is overcome in a very simple manner by this permutated alphabet. It would be impossible for any person ever to commit to memory, or to reproduce it, unless he kept a copy of it, but by a very simple contrivance, if you merely fix upon a word between two correspondents, you can at any time reproduce the permutated alphabet.

1042. Can you explain it further?—The key to your correspondence with any particular person is written upon a circle like this (*producing a circle of paper*), which, when you send a message to him, is placed in the instrument. Then when you require greater secrecy, as for military purposes, this alphabet can be redistributed by the reformation of the cipher which I have already mentioned. I consider that there is greater secrecy in a telegram in cipher than there is in any sealed letter, because it is not open to accidents after it has left the Post Office.

1043. Do you consider that any well-educated person can learn the use of that instrument?—Any person of ordinary intelligence, as you will ascertain by the policemen, who all work it very well.

1044. Mr. *Graham.*] Do I understand that a message sent in that way is intelligible to the clerk sending it, or to the clerk receiving it?—Entirely so. I believe that before the police employed it they had it severely examined by all their detectives; but I am not putting this forward as the only system; there are plenty of other systems. I only mention this as one efficient system of cipher.

1045. *Chairman.*] Have you a specimen of your automatic instrument here?—Yes, I think there is one in the house, and if you wish it it can be brought in in a few minutes.

1046. Mr. *Norwood.*] I suppose you would only expect messages of some importance to be communicated through cipher; of course ordinary individual messages could not be sent through that system, because the sender must have one of those instruments as well as the receiver?—There are ciphers which require no instrument at all which might be used with perfect safety, only there are certain facilities in the use of this instrument.

1047. I suppose it is a fact that under the present ordinary system of telegraphy a clerk at any station through which the wire passes is able to read messages, if he takes the trouble?—Yes, certainly.

1048. So that our ordinary system is not a secret one?—It is not a secret one at all; you entirely trust to the honesty of the clerks.

1049. You say that on the other hand the public would be in a better position to have that secrecy observed under the Government management than under a private system like the present?—I do not think that there would be much difference in that respect; I think that if the telegraph companies were to encourage the more frequent sending of messages by cipher, the same advantages would be attained.

1050. Of course a very large proportion of the messages sent now are not messages of the slightest importance; that is to say, there is no secrecy in them; it is only special messages that require the protection of an instrument like yours?—I have heard a great many gentlemen say that the number of messages which they should send by telegraphic lines would be very much multiplied indeed if it were

were not for the dislike which they have in letting their private and domestic affairs be known to the clerks in the neighbourhood.

1051. Sir *Frederick Heygate.*] Do not foreign governments refuse to allow cipher to be used?—I believe most do, and at the beginning I know all did; they put very great difficulties in the way of cipher.

1052. Was that with the view that they might themselves understand every telegram?—I believe so; I know when the first telegraph line was established in France every message, even for the purpose of the railway, was obliged to be sent to the Minister of the Interior.

1053. I suppose that caused great delay?—It went to him not before it was sent, but after it was sent; I suppose that they wished to have it to see whether there was any sinister motive in sending any of those messages.

1054. Does that observation still hold good, as far as your knowledge extends?—I believe it does; I believe that very great difficulties are put in the way of cipher messages; they could not be sent without express permission.

1055. Mr. *Graham.*] Does not the use of such a cipher as you have shown here necessarily involve a considerable additional charge on the part of the Railway or Telegraph Company?—It does at present, in consequence of the greater care that is requisite in sending the messages, but I believe that difficulty may be removed very considerably if automatic instruments were to come more generally into use.

1056. I do not refer to that, but rather to the impossibility of distinguishing the words, and therefore every letter must be treated as a word?—I am not perfectly aware of the arrangements of the Telegraphic Companies, but I think that they charge double.

1057. In your system there is no such thing as an intelligible word?—No, there is not.

1058. Then each letter must be assumed to be a word, and charged as a word?—No, I should say that they should charge according to the number of letters.

1059. Mr. *Leeman.*] I suppose the reason of the want of confidence on the part of the French Government, and the prohibition of cipher, is, that they may have entire control, in fact, over the telegraphy of the country?—Yes, I presume so.

1060. I dare say you have heard that that control is pretty extensively exercised?—In France it is, but I do not see how it could be exercised in England.

1061. In France it is very extensively exercised, is it not, at this moment?—Yes, it is.

1062. Assuming contracts in which the Government of the country are interested, for example, contracts between the Government and private individuals; do you not consider that that is a very dangerous power with which to invest the Government?—I have already said that they would not understand the cipher.

1063. Do you read the French papers much?—I do not much.

1064. May I ask if you have seen the case to which I referred in the House of Commons?—No.

1065. That was the case of an English gentleman having a large contract with the French Government, who went over to France, who was there three weeks negociating with the French Minister, who received telegrams during that three weeks from his own partners here at home, and that those telegrams were kept from him during the whole period, and that at length he saw upon the table of the Minister, when he came to settle the contract, all his own telegrams which had passed between him and his partners in England; that is quite possible, is it not?—But I cannot see that it has any applicability to this country.

1066. *Chairman.*] Do you know that that happened in France?—No, I do not know that. My opinion is that if private companies were to have the telegraphs in their hands in France instead of the Government, the same difficulties would exist, because the Government would impose the same difficulties upon them.

1067. Mr. *Leeman.*] If the telegraphs of France were in the hands of private companies, the Government would impose upon them the necessity of revealing the messages to the Government?—I believe they would do so.

1068. With regard to this particular system of yours, I believe that you were the original inventor with Mr. Cook of the telegraph system as it was adopted by the

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the Electric Telegraph Company?—I have been very much engaged for the last 30 years in constructing original instruments and in developing the principles upon which they depend.

1069. I do not know whether you have read the blue book of the Electric Telegraph Company?—Yes, I have.

1070. There are statements there made as to the previous improvements which have taken place in telegraphy during the last 18 or 20 years; do you concur in the accuracy of the statements as to those improvements?—It is a very difficult subject for me to enter upon.

1071. Would you admit this, that improvements have been going on in telegraphy during the whole of that period?—Very considerable improvements.

1072. And new inventions by various parties with regard to inventions?—Yes, frequently.

1073. I suppose you do not think that we are quite at the end of the new inventions?—No, we are in a much more stable condition than we were previously, 14 or 15 years ago; many improvements, and important ones, may still be made.

1074. Did you hear Mr. Culley, the engineer, who was examined just now?—I heard some parts of his evidence.

1075. Did you hear that statement of his in which he said that he had heard of some new invention which was to render, I think, wires unnecessary?—Yes, I heard that.

1076. Can you conceive of that?—Certainly not; not that any practical result should ever come from it.

1077. But assuming that improvement has not yet had its termination, supposing some new invention to come up, it is open to be patented in the same way as your own and that of others which have come up in the interval?—Yes.

1078. And the whole cost of the apparatus of telegraphy has been diminishing, has it not, during the last 15 or 20 years?—That would depend upon the nature of the apparatus.

1079. Here are some that have been made which, at all events, have had the effect of diminishing the cost; you would not pay the same amount, for instance, for a telegraphic apparatus at this moment as you did when your own was first brought into operation?—I believe, generally speaking, the instruments now employed are rather more expensive than those that were originally employed, because it is considered much more important to have instruments that will do their work more efficiently and more rapidly, and therefore the cost is not the most important consideration.

1080. The cost of a particular instrument, you mean; but while the cost may be increased, the amount of work got out of it has increased in a corresponding ratio, has it not?—Yes; altogether, perhaps, the improvements have resulted in diminishing the total expense.

1081. Mr. *Goschen.*] Are you acquainted with Captain Barrow's code?—No, I am not; I believe that is not a cipher, that is a code.

1082. You are not sufficiently acquainted with it to answer any questions upon it?—No, I am not.

1083. *Chairman.*] Do you think that practically there would be any likelihood of the property of those Companies being depreciated within a reasonable number of years by the introduction of an improved system of telegraphy?—At the present time I should think not.

1084. You have no faith whatever in telegraphy without wires and poles?—Not the least.

1085. You think that whatever improvements may be made in the processes of telegraphy, the property of the companies, which the Government propose to buy, will still be useful for the purpose?—Yes.

1086. Do you think that it is likely that, supposing the existing system went on, and the Government were not to purchase it, any new companies would be formed to compete with the present companies?—I should think it would be very difficult, indeed, at the present time for a new company to start with any prospect of success, either now or for years to come.

1087. Why do you think so?—The expense of establishing any new company would be so very great, and also the permissions which are necessary to be obtained for placing new poles and new wires would be so very costly at the pre-

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sent time, and so much more costly than it has already been, in consequence of the ground being principally occupied by the existing companies, that that would be one cause.

1088. Do you think that any new company would start with very great disadvantages?—I think it would.

1089. If that be so, does not it give the existing companies practically a monopoly?—Yes; I think it would be a monopoly which would be likely to be kept for years if the Government do not take them now.

1090. Do you consider that the Government, in consequence of their having already offices for Post Office purposes, have advantages for further extension which no company could have?—Yes; I think great advantages exist principally on account of the no rents that would have to be paid for the offices, and perhaps the no complete salaries to the clerks who are employed there.

1091. You think that the existing offices will provide ample accommodation for the instruments that will be necessary?—I think so.

1092. There may be a slight addition to the salaries, but, of course, the employées would be able to work the instruments without employing persons specially for the purpose?—That is quite certain; I know one line which exists on the west coast of Scotland which is entirely worked by the ordinary shopkeepers of the district; it goes from Glasgow to Inverary and down to the Mull of Cantyre and Bute.

1093. You think that there would be no difficulty in teaching the ordinary postmasters and postmistresses and their assistants throughout the country to work the instruments?—None whatever; you might have the instrument that is on the table; there are many of them used in this house; there are a great many others; I will show you the same instrument that is employed upon that line, and it is also employed by all the police throughout the kingdom; you will find that any person of ordinary intelligence in an hour or two would get perfect master of it.

1094. Is this instrument of yours in use now by the Telegraph Companies?—It is in use on the Electric Telegraph Company's line; it has been in use for the last 18 months at Newcastle, and since then it has been established on lines to Glasgow, Manchester, and Edinburgh.

1095. On those lines is it the sole instrument in use?—On other lines in the same towns other instruments are in use; they have only one of those instruments at each of those towns, at least I believe so; the advantage that is gained by this instrument is great increase in speed; in an ordinary telegraphic message, I think, they cannot send more than or at the utmost 20 or 25 words a minute; this instrument in Glasgow works constantly at the rate of from 60 to 70 words a minute, and they have been working at 120 words a minute.

1096. So that the power of the wire in the transmission of messages is very considerably increased by adopting this instrument?—Yes, it is made five or six-fold, and without any noticeable increase in the expense.

1097. Perhaps you will explain to the Committee the use of this instrument?—I will not enter into a description of the instrument, but merely into the effects which it produces. The system is composed of three distinct instruments; the first, which is this (*producing an instrument*), is for the purpose of preparing the messages, and is quite independent of the telegraph line, and may be worked in this committee-room or anywhere that you please; the messages may be prepared in any place.

1098. What do you mean by preparing the messages?—That is a prepared message (*handing a piece of paper to the Committee*).

1099. Sir *Frederick Heygate.*] What do you call the system which you are explaining?—The fast-speed system.

1100. *Chairman.*] This is a message translated into your symbolisms?—That is translated into the symbolisms used by the Telegraph Companies. A slip of paper is placed here, and, on touching the keys, those perforations are made which you observe in the paper. Touching the left-hand key makes a perforation to the left, and touching the right-hand key makes a perforation to the right, and touching the middle key makes the perforations that indicate the spaces between. This instrument may be worked with just the same facilities as the ordinary key of a telegraph is worked, which is attached to a telegraph wire. As I touch those keys, those perforations are made, and the groups of perforations correspond to the different letters of the alphabet.

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1101. *Chairman.*] Then it depends upon the operator whether the translation is an accurate one?—Yes; but in the case of the actual telegraph these same or similar motions transmit the message itself along the wire; but there is an additional security against accident here, that a message, when once prepared, may be looked over before it is sent, and may be seen whether it is correct; or it may be made slowly, so that a person preparing the message may look over it to see that it is all correct before it is sent.

1102. Mr. *Norwood.*] If it was prepared beforehand, there would be a saving in the use of the wires?—Yes, it requires several persons to prepare. Though those strips are prepared as rapidly as messages are upon the ordinary system, it requires several persons to prepare messages to be sent by one wire.

1103. *Chairman.*] The message being prepared, what is the next step?—The message being prepared, it is placed in what is called a transmitter. This instrument (*producing another instrument*) may be supposed to be in London, and the other instrument (*producing another instrument*) may be supposed to be at Edinburgh. This slip being placed in the transmitter, produces dashes and lines and the usual telegraphic character at the distant station. Here is a message actually prepared by that instrument (*producing the same*). That is a message which any ordinary telegraph clerk can read, only that it has an advantage over ordinary messages in having the spaces so well marked; you will observe groups of dashes, and the marks are very beautifully distinguished from each other, so that there can be no mistake by one group running into another. I do not suppose that the existing instrument will be in all cases given up for this instrument, but this instrument I believe will be very useful on all lines of great traffic, and particularly on those lines where newspaper intelligence is sent.

1104. Have you considered the question generelly as to the desirability, in a public point of view, of the Post Office acquiring the telegraph lines?—Yes, so far as I can I have considered it, and I think it would be a very great public advantage.

1105. What are the advantages which you think the public will derive from it?—The two great advantages are these, which have been so frequently mentioned, the cheapening of the messages, and the extending of telegraphic communications to places where the existing companies do not extend them.

1106. Do you consider that the Post Office would be able to extend telegraphic communication to remote places without loss, where commercial companies would decline to do so?—Yes, I believe they could. For instance, a Telegraph Company that at present exists could not carry a telegraph line into a new district, unless they got a considerable profit from it. I know in the case of this line, to which I referred just now, the Cantyre line, it has not been long established, about 18 months, and it pays 3 or 3½ per cent. It would not suit a Telegraph Company to establish a new line which would only pay 3 or 3½ per cent., but it would suit the Government to do so.

1107. Sir *Frederick Heygate.*] Is that one in connection with the submarine line across to Ireland?—No, it is not in connection with any submarine line; it is only to the towns on the coast.

1108. It ends in the Mull of Cantyre?—Yes; it goes up to Inverary and then goes to the Mull of Cantyre.

1109. *Chairman.*] And so in cases where the advisers of the Telegraph Companies have recommended no extension, you think that the Post Office would be justified in making an extension with reference to the public interests?—I think so.

1110. Without fear of loss?—I think so, because in this case the line which I mention gives from three to three and a half per cent., and they have to employ and pay all the persons who transmit this intelligence, and so on. Those expenses would be considerably lowered by its being in the hands of the Government.

1111. So that there would be two reasons for extensions if it were in the hands of the Post Office, one that the cost of the working would be less, because they already have offices and servants, and the other that they need not give good dividends to any shareholders?—Yes.

1112. Mr. *Norwood.*] Let me call your attention to the questions that were put to you by the Chancellor of the Exchequer, with reference to the existing *modus operandi* of the telegraph. You stated, did you not, that you thought there was no probability of any improvement of any consequence occurring in the

the space of a reasonable number of years; I presume that the plant of a telegraph wears out, does not it?—Yes.

1113. Of course the wooden poles wear out in course of time?—Yes.

1114. Does the wire itself become injured by use and require to be replaced?—Yes; after a certain number of years the wire has to be replaced, but I believe estimation is made for the maintenance of the wire which allows for that; there is a certain expenditure put by every year for what is called the maintenance of the wire.

1115. And that system is adopted in all companies, is it?—Yes; I believe so.

1116. Does not the fact of the invention, which you have just been showing us, rather alter the aspect of affairs; supposing that instrument is of that extreme value which you state and which no doubt it is, will it not be necessary for the Telegraph Companies or for the Government, if it purchases the lines, to adopt that instrument to a considerable extent, which, I suppose, is an expensive instrument?—I believe not; I believe it will be found to be the interest of the Telegraph Companies to establish this instrument upon certain lines of great traffic, and no doubt if it is more extensively employed, it will be very gradually employed; it will be employed no doubt in all those cases where it will be necessary to put up new wires, but I do not apprehend that the existing instruments will be completely set on one side on account of this.

1117. In making a purchase of the existing plant of the companies, it is necessary to consider the condition in which that plant is; I mean if you were an individual going to purchase the plant of a Telegraph Company, you would like to inquire as to the state of the wires and so on; that would be an ingredient in your estimate of value, would it not?—Yes.

1118. And those matters do depreciate?—There are certain costs every year for maintenance, and by that charge being paid the wires are always kept up in a great state of efficiency; I do not think that the wires, generally speaking, taking them all together, are less efficient now than they will be three or four years hence; they always ought to be in the same state of efficiency.

1119. Is it not something like renewing a line of railway, and putting down fresh metals; you would have to put down fresh wires, because in the course of time they would wear out?—Yes.

1120. Mr. *Leeman.*] The Honourable Member for Hull has asked you whether the state of repair of the telegraph plant, that is, the posts and the wires, would not be an important consideration with you in estimating the value of the telegraph property?—Those are questions which are out of my line.

1121. I understood you to say yes?—I said that the allowance that the companies make for maintenance ought to keep up the wires in a proper state of efficiency from year to year.

1122. I understood the Honourable Member's question to have reference to a negotiation for the purchase of the telegraph property; and the state of repair would be an important element with you, would it not?—Yes.

1123. But would not this also be important, the term that the Telegraph Companies have in the posts and wires?—You mean with regard to their arrangement with the railway companies; undoubtedly it would be so.

1124. Are you aware that with a regard to a great number of railways, they have the reversion in the telegraph posts and wires?—I understand so.

1125. And have you seen those agreements which have been put in here?—I saw a list of them.

1126. They were pretty voluminous, were they not?—Yes.

1127. And do you not know that, with regard to many of the companies, a few years will elapse before the whole of the apparatus falls into the hands of the Railway Companies?—That would depend upon the arrangement made with the Railway Companies.

1128. Are you aware that arrangements have been made with the Railway Companies, by which the reversion in the telegraph posts and wires falls into the hands of the Railway Companies in a very short time?—Yes.

1129. In some cases as early as three or four years?—I saw an instance in one of the Scotch papers a few months ago; I think it was from Aberdeen to Peterhead, where in consequence of the license expiring, the Railway Company took up the telegraph and raised the prices to Peterhead considerably, and also very much less advantages were given.

1130. That existing to a large extent would affect the price to be given for the telegraphs

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telegraphs, would it not?—On the expiration of such agreements, and supposing that they were not renewed in any way, the companies would always have the right of placing their wires along the lines, as they have now; perhaps at some additional expense.

1131. Were you here this morning when the agreements with the Railway Companies were put in?—No.

1132. Assuming that the Railway Companies are entitled to the reversion, and to be paid for that reversion by arbitration after the expiration of the existing leases, varying, as those do, as you know, from four, or five, or six years to 10 or 12 years, that would make them come to a very large sum of money, would it not?—I think it may; I do not know.

1133. You say that the line to the Mull of Cantyre pays now 3½ per cent.?—Three or 3¾ per cent.

1134. What did that line cost?—As well as I can remember about 12,000*l.*

1135. Is that line 18 miles long?—I think it is more. The secretary of the company is here, and he can tell you. It has about 20 stations.

1136. Have you any idea of the length?—The length is 360 miles, I should imagine; it is a single wire.

1137. *Chairman.*] Where does it come from?—It starts from Glasgow, goes up to Inverary, and then goes down to the Mull of Cantyre. I am informed that it is nearly 200 miles in length.

1138. Mr. *Leeman.*] Do I understand you that that is the line which goes from Glasgow?—It does.

1139. And it has got upon it 20 stations?—It has 20 stations.

1140. Can you give me those stations?—No, but they can be supplied.

1141. Can you give me any idea of the extent of the population that is served by this line?—No, I do not know.

1142. At all events it is a population that has seemed to the Telegraph Company to justify 20 stations?—Not the Electric Telegraph Company; they would not establish the line.

1143. But it has been put up by some one?—Yes, it has been put up by the Universal Private Telegraph Company.

1144. That is a company formed in London?—Yes, that is a company formed in London.

1145. For the purpose of supplying telegraphs all over the United Kingdom?—It has a working agreement with the Electric Telegraph Company only to establish lines where they do not establish them themselves. This line is in connection with their stations.

1146. Supposing they were putting up that telegraph, there would first of all be an application to the Electric Telegraph Company itself; they would not put it up unless the Electric Telegraph Company had first refused, as I understand you?—Not unless they refused, but unless they had no existing lines there.

1147. The Universal Telegraph Company is a company formed for commercial purposes, and expecting dividends?—Yes, the principal object is to furnish public offices and private establishments with private telegraphs.

1148. You have given us this as an instance to justify the belief which you have expressed that the carrying of telegraphs into remote districts might pay the Government, while it would not pay private parties; that involves the question, does it not, of a similarity between the circumstances of any remote district where the telegraph was to be carried and the Mull of Cantyre?—This is the only district upon which that experiment has been tried.

1149. You would not call a district which in 20 miles has got 20 stations a remote and thinly populated district, would you?—But it is a district which had not the advantage of telegraphic communication before.

1150. I am aware of that, but still it is a district in which there must be much more population than those remote districts which have been spoken of; is not that clearly so?—I do not know; I believe that there are a great many other places which are not supplied with telegraphic communication.

1151. Do you know the country down between Glasgow and Inverary?—No.

1152. You do not know the class of population through which it goes?—I do not.

1153. Does it go down to Dumbarton?—I do not know; I do not think it does.

1154. You

1154. You do not know the Mull of Cantyre and the country between that and Glasgow?—No.

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[The Witness withdrew.

The *Chairman* stated that the Committee might think it would be desirable that a statement should be put in of the cost of the line to the Mull of Cantyre.

Mr. *Thomas Kettle*, called in; and Examined.

1155. *Chairman.*] You are a Superintendent of Police of Scotland Yard, are you not?—Yes.

Mr. *T. Kettle.*

1156. Have you had the management of the electric system in connection with the police?—I have.

1157. For how long?—Since its establishment in October last.

1158. Have you been employed to instruct the police in the use of that system?—I have.

1159. What system have you adopted?—Professor Wheatstone's alphabetical system.

1160. Is that what is commonly known as the A. B. C. system?—It is.

1161. Have you found any difficulty in instructing the men of the force in the use of it?—None whatever.

1162. Have you to acquire any knowledge of electricity in order to work it?—None whatever.

1163. Have you been into different parts of the country to give instruction as to the use of this instrument?—No, not as to the use of the instrument, but as to the use of the cryptograph instrument; that is for telegraphs in cipher.

1164. You have been sent about to instruct the members of the police force in the use of the cipher, have you?—I have.

1165. Where have you been for that purpose?—To Dublin, Manchester, Liverpool, and Birmingham, and I have instructed the Chief Constable of Lancashire also.

1166. Was that done in consequence of the Fenian disturbances?—It was.

1167. What system do you use for the transmission of cipher messages?—Professor Wheatstone's cryptograph instrument.

1168. The one that he has explained to the Committee to-day?—Yes.

1169. Did you find that there was any difficulty in acquiring a knowledge of the use of that instrument?—Not the least; it is very simple, indeed; a person can be instructed in 10 minutes how to work it.

1170. Did you find any members of the police force unable to acquire the use of it?—No; they were only heads of departments that I instructed in the use of the cipher by the cryptograph, because when a message is put into cipher it is transmitted in the ordinary course by any telegraph instrument.

1171. Then it was the A. B. C. instrument that you instructed the ordinary members of the force in?—Yes.

1172. But with regard to the cryptograph, you only instructed the heads?—That is so.

1173. And they had no difficulty in understanding it?—None whatever.

1174. Is the cryptograph instrument in use in the Home Office in London?—It is.

1175. And in the Irish Office?—It is.

1176. Have you found that it defeats inquisitive people as to understanding the messages?—Perfectly and entirely, I think.

1177. There has not been any case of a message being deciphered?—No.

1178. Do you find any more difficulty in sending a cipher message than a common message when a cipher has been once made for the purpose?—No, there is no more difficulty; there is more care required by the telegraph clerks, and the companies themselves charge an increased rate; they charge each letter as a word, which makes the message very high.

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1179. Mr. *Norwood.*] A letter is a word, is it not, in your cipher?—No; one letter represents another letter.

1180. Mr. *Leeman.*] Were you ever in the French police?—No.

1181. Have you got a man at your place who was?—Several, I dare say.

1182. Was Inspector Thomson?—No, he was never in the French police, to my knowledge?—I think I can safely say he was not.

1183. Sir *Frederick Heygate.*] Is this cryptograph system in use in any other part of Ireland besides Dublin?—I think not; not to my knowledge.

1184. It is only used as a means of communication between the Home Office here and the Irish Office in Dublin?—Yes.

1185. Does it come to your knowledge in any way that the electric telegraphic messages belonging to the Government have been read in the Irish Telegraph Offices in the last year?—No, it did not with the particular messages that it was thought best to send in cipher, for fear they might be read.

1186. Are there no instances in which you have found, from experience, that Government messages have been read?—I have never heard of any.

[The Witness withdrew.

Mr. *Latimer Clark*, Examined.

Mr. *L. Clark.*

1187. *Chairman.*] You are a Civil Engineer and an Electric Engineer?—I am.

1188. Have you paid great attention to electric telegraphy?—I have.

1189. What is your opinion of the practical possibility of a person tapping the wires or milking the wires, so as to ascertain what messages are being sent along from one correspondent to another?—Practically it would be quite impossible to do that on anything like a considerable scale, it might possibly be done once in a way and not be found out, but it could not be done on anything like an extensive scale.

1190. Under what conditions could it be done?—For a short time a person living in a house on the roadside, might burrow under the cellar and get communication with the telegraph pipes, and might for a short time become acquainted with the correspondence, but it must be discovered in a very few months.

1191. In order to obtain such information, to tap the wire and get possession of the message, would it be necessary to have the same instrument as was used for the transmission of the message?—Yes; you must find out what instrument they are using, which you could soon do by the indications that you receive on the wire; after separating the wire and putting your own in circuit, you would soon discover what instrument they are using, and you would put in an instrument of your own and would read what passed, but the moment they attempted to repair the wire, they would discover what you had done.

1192. That would discover it?—In trying to draw out the wires and exchange them for fresh ones, they would find that they had been opened and attached; they would at once discover the circumstance, and the whole thing would be found out.

1193. Sir *Frederick Heygate.*] That is supposing it was left attached?—You could not alternately attach it and detach it, there would be no power of doing that; if you once tapped the wire it remains open for ever, and the moment those wires are repaired, which is a matter of occurrence every few months, the thing must be discovered and the world must know it.

1194. You would discover it from the marks on the wires?—Yes; you would discover it from the marks on the wires, so that practically to my knowledge, the thing has never been done or could be done. In the open country it is obvious no one could attempt to do it, in open air wires such a thing would be impossible.

1195. *Chairman.*] It has been suggested that wires might be laid down in some Government office, and that there an operator might ascertain the whole of the messages which were being sent by the public; what is your opinion upon that point?—It is perfectly impossible, without the knowledge and connivance of every one about the office. The whole of the communications are in the

the hands of the employées, who must be in the secret, and if anyone were to tamper with those wires they would be discovered immediately. All the wires are laid direct from the street to the instrument, and from the instrument they are laid direct to one common earth wire, which serves for the whole establishment; and if at any time along that line any tapping were done, it must be thoroughly well known to every one in the office. Practically such a thing is quite out of the question. And I might add to that, that, in order to obtain any considerable amount of information, it would require a staff as extensive as the staff in the office itself. To obtain anything like correct knowledge of what passes by the staff of the Electric Companies' Office, you would require somethink like 100 clerks and 100 instruments, and such a thing could not be done in secret.

1196. Is there testing of the wires constantly going on?—Yes, constantly, daily or weekly.

1197. Whenever the testing went on, would the testers be able to ascertain that those tricks were being played with the wires, if such a thing were done?—If they saw any ground for suspicion, they would quickly discover the additional resistance caused by the interposition of an instrument; and there would be much difficulty in the thing being done secretly, from the circumstance that the wires are being constantly interchanged. The connecting wires which belong to one instrument to-day are constantly shifted to another instrument on the succeeding day, and any secret office would be utterly confused in keeping up anything like a practical communication, even supposing the employées at the office would keep the thing secret; but you would want a great number of skilful employées to be able to have anything like a practical knowledge of what is going on; and, of course, such a thing could not be kept secret; so that I think such an idea is perfectly chimerical.

1198. Have you ever heard of that having been adopted in any existing systems?—In America.

1199. During the war, I suppose?— Yes: but not in this country. I have heard of it also during the peace. I believe in India it has been done also. In the wilder parts of India the wires, I believe, have been temporarily separated. At a critical moment, when important messages were expected, the people have gone into the desert, and, introducing an instrument, they have read off the messages. I believe that it is reported that such is the case among those who have had good opportunities of knowing; but I never heard of it in this country.

1200. Do you think that there would be any more risk of that under a system of Government telegraphy than under the system of commercial telegraphy?—Not any, I should think.

1201. Mr. *Leeman.*] I suppose that would depend upon motive?—Whatever the motive, I do not think that they would succeed in doing it without discovery.

1202. You have been speaking of foreign interference with the wires; you do not mean to say that if any official of the Government wished it he could not obtain information?—I do not believe he could tap the wire without its being very soon known to all the world.

1203. He could not obtain the information without its being very soon known to all the world?—I cannot say that he could not obtain information without its being very soon known to all the world; but he could not tap the wires without its being known.

1204. How do they obtain the information in France?—I have heard it given in evidence that the messages are sent to the Government in France, and I have heard it denied by the French Government that such is the case; but I have no other knowledge.

1205. But if there is a motive on the part of the Government, why should they not do it here?—I do not believe they could do it without its being well known to all the world, whatever the inducement or the motive might be.

1206. Do you mean that gentlemen who have invented those great improvements in telegraphy could not devise a mode by which any Government department could have a wire, and ascertain what messages were passing through any particular wire if they were so minded?—If they had access to the office as officials of the Telegraph Company they could as I had once; I might have gone into the office to any particular instrument, and might have stood for five

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minutes and read, and did read the messages passing over that instrument, but if I had done that habitually, or employed a number of persons to do it, which would have caused remark, they would, of course, have said, why are you always reading the messages.

1207. It is not necessary that there should be that concealment always on the part of the Government, is it?—I do not know.

1208. Then it comes back to this, that if there was a motive upon the part of the Government, and a desire to have information, is there any real difficulty in their getting it?—No, but there would be great difficulty in getting it, without all the world knowing that they were in the habit of obtaining it.

1209. Supposing that they were not in the habit, but if they were to do it only occasionally?—Of course, when they have the control of the telegraph they might know the messages.

1210. *Chairman.*] Supposing that a cipher was employed, unless they had the key to that cipher, I suppose they would be baffled?—Of course, they could not read the cipher.

1211. Mr. *Leeman.*] That is the case now, is it not?—Yes, some messages are in cipher now, and no one can read them but those who understand the cipher.

1212. Is there nothing in adopting a cipher in the future which does not apply at present?—Nothing that I am aware of would prevent a cipher being used.

1213. Mr. *Charles Turner.*] You said that if the Government obtain those messages it must be known to all the world?—It must be known to their employées, but I presume that no Government would dare to enter into collusion with their employées to obtain secret messages.

1214. That being the case it would deter the Government from doing it?—Yes, I imagine so.

1215. In France it is an acknowledged system, and therefore there is no secrecy about it at all?—I do not know the system in France. You are aware that a paper has been published by the English Government in one of the Blue Books in which the French Government deny this statement; it is in the Blue Book published about 12 months ago.

1216. At all events it could not be done in this country without being known to so many people that practically public opinion would cry it down?—That is my opinion; a few messages might easily get known as they might at present, through any employée who had access to the instruments and whose business it was to attend to the work, but to do anything extensive in that way it would be immediately known and suspected by all this very numerous body of people who have the operation of the messages.

1217. But, practically speaking, the Government could not take advantage of anything of the kind without its becoming known to a sufficient number of people to publish it to everybody?—No, I feel confident that the employées would not dare to attempt it.

1218. Therefore you think public opinion would set it down?—I think so immediately; I know it would be discovered under the present regime; if we were to attempt any of us to become aware of the contents of a great number of messages it would be immediately known and detected; we must have a great many in collusion with us before we could do so.

1219. Mr. *Norwood.*] Did you hear Sir Charles Wheatstone's evidence and the questions which I put to him with regard to the present state of the plant of the Electric Telegraph Companies?—I did not.

1220. Are you of opinion that the state of the plant of the existing Telegraph Companies is good upon the whole?—It is in a state of very good maintenance.

1221. Are you of opinion that any improvements in instruments or otherwise are likely to be brought out within the next few years which will render that plant of less value than at present?—Nothing, I think, which could possibly have any material bearing upon it.

1222. You think that it is not a bad commercial transaction, then, to purchase the present plant with the view of making use of it for a considerable number of years to come?—It of course depends upon the price, but from all I do know (I have given very slight attention to the subject, because I am not much interested in it) I should think that it would be a highly profitable transaction.

1223. What

1223. What I meant was this: would the Government in purchasing the present telegraph plant be purchasing an efficient article?—Perfectly so.

1224. An article not likely to be superseded speedily by some very much improved system which would render the present plant of comparatively little value?—I think certainly it would not be so. The plant is a perishable thing and always in a state of transition and repair, but it is very well maintained at the present time upon the whole.

1225. By all the companies?—I am not familiar with any company except, perhaps, my own one, the Electric and International Company, which is a large company. I know that their plant is in a very good state of repair and very efficiently kept up, but it is constantly out of order and constantly being renewed, and the present price that we are paying for renewal would renew it for ever and ever.

1226. Have you a renewal fund?—Yes, which is ample for keeping it in good order.

1227. Sir *Frederick Heygate.*] Are you connected with any Telegraph Company now?—Not with any commercial Telegraph Company in this country. I am connected with some of the foreign telegraphs; the submarine lines.

1228. Is there any punishment to which the clerks of the company are liable in case they divulge the messages?—I do not know how the law may stand with regard to that.

1229. What arrangements have the Telegraph Companies themselves with regard to that?—I am more familiar with the engineering matter of the company. I do not know about that; it is not in my department.

[The Witness withdrew.

[Adjourned to To-morrow, at Eleven o'clock.

Tuesday, 7th July 1868.

MEMBERS PRESENT:

Mr. Goschen.	Mr. Leeman.
Mr. Graham.	Mr. Norwood.
Sir Frederick Heygate.	Mr. Potter.
Colonel Fane.	Mr. Charles Turner.

THE CHANCELLOR OF THE EXCHEQUER IN THE CHAIR.

John Edward Taylor, Esq., called in; and Examined.

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1230. *Chairman.*] ARE you Proprietor of the "Manchester Guardian"?—I am.

1231. Have you advocated in the columns of that paper the desirability of placing the telegraph system under the control of the Post Office?—Yes, for some years.

1232. Was that before the Post Office authorities took the question up?—A long time, so far as I know.

1233. Have you taken the chair at meetings of the provincial newspaper proprietors to consider the subject?—Yes; three times.

1234. Arising out of those meetings, have attempts been made to establish an organisation for the collection of intelligence for the newspapers, independent of the Telegraph Companies?—Some two years ago an attempt was made, before this Bill was in contemplation; and since we have had to consider what its effect would be upon the Press we have also been engaged in establishing such an organisation.

1235. Have you seen your way, since this scheme was before Parliament, for organising a system of obtaining news for the Press?—I see no difficulty whatever in it.

1236. The newspaper proprietors propose to collect their own news through an intelligence department, and that the Post Office should have nothing to do with it except so far as regards the transmission of the news when so collected?—Yes.

1237. As regards the interests of the newspaper press, do you think that system would work better than the Telegraph Companies having the intelligence in their own hands?—I think, decidedly better.

1238. The newspapers will collect the news which they think will serve their purpose, and they will be independent of the views of any other bodies collecting intelligence for them?—Yes, just so; they would collect it by a co-operative association.

1239. Under the present system, you are in the hands of the Telegraphic Companies as to what news they will send you?—Entirely.

1240. Have you found it the case sometimes that you have received news you did not want, and were out of news that you did want?—Yes, that is so.

1241. Have you been in communication with the Post Office on the subject of rates for the transmission of news?—Yes, for some months past.

1242. What conclusion has been come to as to the rates?—The Post Office authorities agreed with us upon the general principle that the cost of transmission ought to be no higher than it is at present; that, inasmuch as this Bill is designed to cheapen telegraphic communication for the public, it certainly ought not to raise the cost of it to us; and, upon that basis, we have endeavoured to arrive at an understanding.

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1243. Are the rates which you have agreed upon, and which are proposed to be inserted in the Bill, these: for night messages, 1 *s.* for 100 words to one address?—Yes.

1244. And 2 *d.* for the transmission of the same matter to every additional address?—Yes.

1245. And the day rates will be the same, except only that 75 words will be considered a message under the proposed tariff, instead of 100 words?—Yes.

1246. Will you compare the cost to you of receiving news in that way with the present cost of receiving the news from the hands of the Telegraph Companies?—It is not very easy to compare it; the comparison, after all, can only be an approximate and theoretical one. I should like to explain that at present a large proportion of the news published in the provincial newspapers is received under a subscription contract with the Telegraph Companies. The Telegraph Companies report the Parliamentary Debates, and send reports of markets and other matters to the amount of about 4,000 words per diem on the average. They deliver that matter to us in the country, and charge us rates varying from 150 *l.* a year to 250 *l.*, the average being about 200 *l.* By the tariff proposed to us by the Post Office authorities, the cost of transmitting a similar amount would be somewhere about 126 *l.* or 127 *l.* a year, and we conceive that for the difference between that and 200 *l.* probably the news might be collected by the organisation we propose to establish.

1247. At present the 200 *l.* covers the cost of the collection of the news?—It covers the cost of the collection of the news and the transmission.

1248. The 127 *l.* which you reckon you would pay to the Post Office would only cover the cost of transmission?—Yes.

1249. You think that the difference would be absorbed in the expense of collection?—I should say fully absorbed in the expense of collection.

1250. Therefore you do not expect that to you the cost will be less?—I think, if anything, it will be rather more.

1251. If the cost will be more, wherein will be the advantage of the change to you?—I think that we shall be able to supply ourselves more precisely with that description of intelligence which we require.

1252. In fact the quality of the article will be better?—Yes.

1253. Do you know whether there is a difference of opinion among the proprietors of newspapers on this matter?—There has been a certain difference of opinion, though not very wide. Some papers, not perhaps the strongest, are apprehensive that the rates will prove to be decidedly higher than those they pay at present.

1254. Can you give the Committee any information as to the number of newspaper proprietors who have petitioned in favour of this Bill, and can you say what is the proportion to the whole Press?—I am not able to give that.

1255. As I understand it under the existing system, the supply of news is a thorough monopoly?—It is so.

1256. Have any disadvantages been found from that monopoly?—Yes, I should say decided disadvantages; we have not such facilities as we should like to have, and as would enable us to conduct our business in the most convenient manner to ourselves.

1257. Under the Post Office system there would be no monopoly as to news, but every newspaper proprietor would obtain his intelligence as he desired it, the Post Office transmitting the intelligence for him, whatever it may be?—Yes, I think there would be much greater latitude for us.

1258. Mr. *Leeman.*] I understand you to say that the Press is not unanimous upon this?—Certainly not; it would be difficult to find the Press unanimous upon anything.

1259. Do you belong to the Provincial Newspaper Society?—Yes.

1260. Were you at a meeting of the society at the Crystal Palace a short time ago?—I never attended a meeting of it in my life; I am a sleeping member.

1261. But I suppose you receive the communications of the society?—I believe I receive them.

1262. Will you look at that (*handing a paper to the Witness*)?—I should be unable to identify it; it appears to have emanated from the Provincial Society.

1263. You are a member?—Yes.

1264. Did you get a copy of it?—I cannot say, I take no concern in the society.

1265. What

1265. What are the newspapers that differ in opinion with you?—I could not at all name them. The sentiments of which I have spoken have been expressed at meetings; and, as you must be very well aware, it is very difficult afterwards to remember who said everything.

1266. There are some of the leading men of the Press who have expressed those differences of opinion, are there not; I mean in the country?—I am not aware of it.

1267. Do you know the proprietor of the "Yorkshire Gazette?"—No, I do not.

1268. Do you know the proprietor of the "Doncaster Gazette?"—I do not. I should hardly consider those leading papers.

1269. The "Sheffield Independent?"—The "Sheffield Independent" I know the proprietor of.

1270. Mr. Leader?—Yes.

1271. Do you know he is opposed to your views?—No; he certainly has expressed no important difference from my views.

1272. Do you know the "Sherborne Journal?"—No, I do not.

1273. The "Stamford Mercury?"—The "Stamford Mercury" I know well.

1274, Does the editor or proprietor of the "Stamford Mercury" agree with you?—I do not know; we hardly consider that to be a newspaper, it is more an advertisement sheet; it is a paper of a very local character.

1275. "Government Telegraph Bill and the Newspaper Press," will you look at that (*handing a circular to the Witness*)?—This appears to be the "Money Market Review."

1276. *Chairman.*] What is the date of that?—The date is not upon it.

1277. Can you tell when the article was written, from the tenor of it?—It appears to have been written six weeks or two months ago; it refers to an action of the President of the Provincial Newspaper Society in sending round petitions in favour of the Bill, which I happen to know was done six weeks or two months ago.

1278. Did you receive Petitions at Manchester from the President of the Provincial Association?—One was forwarded to me in London, where I happened to be.

1279. By Mr. Fisher, the President of the Provincial Association?—I believe it came from him.

1280. Is he here?—Not that I am aware of.

1281. Is he the gentleman that presides at the meetings of the association?—I am unable to give any information about the association.

1282. About what is the number of provincial newspapers in the country?—Between 1,100 and 1,200.

1283. How many have petitioned in favour of this Bill?—The Chairman asked me that question, and I was unable to say.

Mr. *Rodwell* was heard to state that 297 Petitions in favour of the Bill had been sent in by the Press; those being principally provincial papers, and many of the Petitions not being confined to one paper; so that the 297 did not distinctly represent the number of papers in favour of this Bill.

Witness.] Perhaps you will allow me to state that I believe there are now not more than between 300 and 400 papers which take the news from the Telegraph Companies; therefore, the whole 1,200 are very little interested in this question.

1284. Mr. *Leeman.*] As I understand you, you now pay 200 *l.* a year for what, upon the average, will give you 4,000 words per day?—That is so, I believe.

1285. But a paper with the very large circulation of the "Examiner" and the "Guardian," gets considerably more than 4,000 words a day, does it not; do you not sometimes get as many as 7,000 words a day?—That might be; but, on the other hand, we might sometimes not get 1,000.

1286. You get sometimes, upon special occasions, as many as 7,000 words a day?—I have heard that it is so; I never counted them myself.

1287. The "Guardian" would get that large quantity, if any paper did?—It would not be safe to assume that. It has happened that we have been without news that has been sent to other papers.

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1288. Except occasionally and accidentally, the "Manchester Guardian" surely would put forth to its numerous readers in Yorkshire and Lancashire as much matter as any paper in the north of England?—Unfortunately, under the subscription, the "Manchester Guardian" has no power in the matter, inasmuch as it has to take what it can get.

1289. It does sometimes get 7,000 words a day, does it not?—I have already said I have heard that it does, but I never counted the words myself. The estimate of 4,000 words is based upon the calculation I believe made by the Telegraph Companies themselves, so I take it to be authentic.

1290. That is upon the average?—Yes.

1291. Do you agree with Mr. Scudamore that that is a rate unquestionably low?—That is a rate unquestionably low.

1292. You expect to get from the Post Office your work done, irrespectively I mean of the collection; the collection is now to be a matter of your own?—Yes.

1293. You expect to get that same work done, as far as telegraphy is concerned, for about 126 *l.* a year?—Somewhere about that we hope.

1294. Will that be unquestionably low?—That will be unquestionably low.

1295. The collection is to cost you 74 *l.*?—The collection may be made to cost I fancy much more if it is well done.

1296. You do not expect that in a financial point of view you will be gainers?—We believe under the new system we should do as well as we do now for the odd 74 *l.* a year.

1297. Is that the unanimous opinion of the Press?—That is not the unanimous opinion of the Press.

1298. There is a very wide difference of opinion on that, is there not?—I do not think there is a very wide difference of opinion on it.

1299. "Wide" without "very"?—I should say not; there is a difference.

1300. A difference which you have had a difficulty within the last 10 days in reconciling?—Certainly not.

1301. You had a meeting in London last week?—Yes.

1302. Was not there a strong difference of opinion expressed at that meeting?—Not very strong.

1303. Strong?—Yes, perhaps strong.

1304. Were those expressions of opinion from newspapers of considerable circulation?—I should be sorry to say that they are not of considerable circulation; I am sure I hope they are, but I have no information upon the point. Perhaps you will allow me to say in regard to that, in order that my answer may not be misconstrued, that the cost of collection must of necessity depend upon the number of subscribers. If the Press is unanimous, if the Press all come into our association, as we hope they will, we have very little doubt that the news may be supplied at a very small increase, if any, upon the present rate; but should only a small portion come into the association, of course the cost must be raised.

1305. Whether you are to do the work at 74 *l.* depends upon the number of subscribers to your new company?—Clearly so.

1306. To do that you are contemplating the formation of a joint-stock company?—Yes; that was the purpose of the meeting the other day.

1307. With what capital, may I ask?—I believe it is stated in the Minutes.

1308. *Chairman.*] You have no objection, I suppose, to put in the Minutes of the meeting?—Not the slightest (*handing in the same*—Vide *Appendix*); I find I was wrong in stating that the number of newspapers which took telegrams was between 300 and 400; it is only 163.

1309. So that there are a larger number of petitioners than are interested?—That probably is so; there are no doubt many who would avail themselves of the telegraph under the new system, who do not use it now?—I know of papers who have given up subscribing.

1310. Mr. *Leeman.*] As I understand you, you do not expect the Post Office to make any money out of the 126 *l.* a year which you are to pay?—We hope they will.

1311. It is unquestionably low?—It is low, but that is a relative term wholly; it seems low, but I am not prepared to say that it is lower than the Post Office can afford to do the work for.

1312. Has your attention been called to the arrangements to be made by the

the Post Office with regard to news-rooms and exchanges in the country?—Yes.

1313. Do you know what arrangement is to be made by the Post Office with regard to them?—I do not.

1314. Has it been a matter of discussion at your meetings?—Certainly.

1315. Has the Press objected to the Post Office supplying news-rooms and exchanges?—Some persons have objected at our meetings certainly.

1316. Many?—A considerable number were prepared at first to object, but I should say that the opinion of the majority has changed very decidedly.

1317. At first there was a very strong feeling on the part of the Press against the news-rooms and exchanges being supplied?—Yes, in certain quarters there was a very strong objection.

1318. How did that feeling change?—It has changed during the process of the discussion on the Bill, especially at the meetings we have held; I believe that the balance of the argument is strongly in favour of letting the Post Office do as they like upon the matter of either supplying the news rooms or not, as facilities may be given.

1319. I find in a letter of Mr. Fisher's this paragraph: "I believe the newspapers, if not thus interfered with, will pay a larger sum for the intelligence than they can do where its value is destroyed by posting it in public rooms, before it can be printed;" has that been the argument?—That has been the argument, to a certain extent.

1320. *Chairman.*] Will you take the Minutes of the meeting in your hand, and will you read out the names of the papers represented at that meeting?—The "Manchester Guardian," "Belfast Northern Whig," "Birmingham Daily Gazette," "Birmingham Daily Post," "Bristol Daily Press," "Cork Examiner," "Cork Daily Herald," "Dublin Freeman's Journal," "Dublin Daily Express," "Dublin Saunders's News Letter," "Dublin Evening Mail," "Dundee Advertiser," "Edinburgh Scotsman," "Edinburgh Evening Courant," "Glasgow Daily Herald," "Glasgow North British Daily Mail," "Hull Eastern Morning News," "Leeds Express," "Liverpool Courier," "Liverpool Mercury," "Manchester Courier," "Manchester Examiner and Times" "Newcastle Chronicle," "Newcastle Northern Daily Express," "Plymouth Western Daily Mercury," "Plymouth Western Morning News," "Sheffield Daily Telegraph," "Sheffield Independent."

1321. Are there in that list some of the most important provincial newspapers represented?—Certainly, I should say with one exception, the most important.

1322. Did the representatives of those papers at that meeting accept the arrangement which has been agreed upon by the Post Office?—As far as I remember there was only one dissentient.

1323. May we consider that you in the evidence given to-day represent the views, with that exception, of the newspapers, a list of which you have read?—I should say, yes.

1324. Mr. Fisher is the President of the Provincial Newspaper Society?—Yes.

1325. With regard to what a Member of the Committee has put to you with regard to the views of the Provincial Newspaper Society, will you put in the correspondence? (*The same was handed in.—Vide* Appendix, B.) Are you aware that the President of the Provincial Newspaper Society has petitioned in favour of this Bill?—I believe he has. I have heard him approve of it.

1326-7. Mr. *Norwood.*] A question has been put to you whether you thought the proposed charge of 126*l.* per annum would be remunerative to the Post Office. I presume the only expenditure which the Post Office will incur with reference to the transmission of that news will be the salaries of the people employed in transmitting the news, because the first cost of the posts and wires has already been incurred for general purposes, so that the 126*l.* a year may very probably leave a profit; is that your opinion?—I am not able to form an opinion upon that that is worth much, but I should suppose the expenses you have mentioned are the principal ones that would be incurred.

1328. With regard to the cost, you do not object to the present charge for news made by the Telegraph Companies, but you object to the quality of the news?—Yes.

1329. You frequently have intelligence transmitted to you of little or no value

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value for your purpose, and transmitted in a form in which it is of little service to you?—Yes.

1330. You believe, having yourselves the power of collecting such intelligence, you would be able to serve the public better?—Yes.

1331. You are prepared to incur any little extra expense in the collection of news which may be necessary in the first instance?—Quite so.

1332. You have no fear at all that the Post Office will treat the entire newspaper press in the provinces with perfect equality and fairness?—I have not.

1333. You have confidence that they will act with strict impartiality, that your expression of opinion on public matters will not be guided or influenced by the fact that, to a certain extent, you are in the hands of the Post Office?—I believe we shall have a much more effective control over the telegraphs than now.

1334. You would not hesitate as a journalist to make comments upon public affairs with the same freedom as now, or with even still greater freedom?—Certainly not.

1335. Mr. *Potter.*] You have been proprietor of the "Manchester Guardian" for many years. I think it was originally a sixpenny paper?—Yes; that was before my time, it was 7 *d.*, then it went to 4 *d.*

1336. Then it became a twopenny paper?—Yes.

1337. And now a penny paper?—Yes.

1338. Is not it much more profitable at 1 *d.* than it was at 7 *d.*, or 4 *d.*, or 2 *d.*?—I think I may say it is.

1339. Would it be your opinion that a similar reduction in telegraphic messages would tend to increase the profits of the Post Office in a similar way?—That is my opinion unquestionably; I am sure that under the new system I shall pay more for telegrams than I do now.

1340. Would it be your opinion, taking the proposed reduction in price from 2 *s.* to 1 *s.*, would recoup itself within a very short period?—Certainly, I believe it would.

1341. Would it, in your opinion, answer much better and be more likely to produce a larger revenue at half that price, namely, 6 *d.*?—I am inclined to think it would. I do not think that 1 *s.* is the minimum at which it ought to be placed.

1342. Has there been any opinion expressed in Manchester stimulated at all by articles in the "Manchester Guardian" upon this subject?—I am not aware of any.

1343. Are you aware of any public petitions from Manchester within the last ten or a dozen years upon the subject of telegraphic communication at all?—No; I am not aware of any; but, since this question has been most mooted, I have been a great deal absent from Manchester, and I should be hardly aware of such a petition.

1344. Any public expression of opinion on the subject would have been noticed in your own paper?—Probably so.

1345. Have you any recollection of a public meeting being held in Manchester by the United Kingdom Company?—No, I do not remember any meeting being held; I know that great efforts were made by them to obtain support.

1346. They were unsuccessful?—They were unsuccessful, but I think necessarily so.

1347. Did you hear of any support being given to them in Manchester either in shares or anything else?—A certain amount of support; I myself was induced to subscribe to some of their bonds, but to a very small extent; and other people, I believe, were asked, and, no doubt, some did subscribe in the same way.

1348. Are you a shareholder in the other Telegraph Companies?—I have not a telegraph share.

1349. In the opinions expressed by the Post Office considerable reliance is placed upon the extension of domestic telegraphs; do you think there is any great field for domestic telegraphs at present existing in Manchester; do you think that the population would use them?—I should think there is not, probably, a very large field for their use.

1350. Would many people in Manchester, in your opinion, use the telegraph for domestic purposes, supposing the charge was 1 *s.*?—There is no doubt that

messages of that class would be very much more numerous if the telegraphs were at once brought home to every man's door, and the charge were reduced. *J. E. Taylor*, Esq. 7 July 1868.

1351. To what point?—I think it should be at a less rate than 1 *s.*, certainly.

1352. You have been asked the number of words you are accustomed to have; you say up to 4,000 a day. I suppose when you report long speeches you have special reports of your own?—Frequently.

1353. For which you pay separately?—Yes.

1354. And which you would be prepared to do again, I suppose?—Yes.

1355. Mr. *Turner.*] You have stated that the United Kingdom Telegraph Company had been, in your opinion, "necessarily unsuccessful;" will you explain that?—My reason for saying so is this: that the United Kingdom Company only served such a limited number of towns, that I do not think it ever had any chance of success. A cheap telegraph, in order to be successful, must go everywhere, because, if you or I go to the United Kingdom Company to telegraph to a particular town, taking the trouble to go half a mile to the office and find that it does not run to the town, even though it may be an important one, we should not go there again. And then, again, the United Kingdom Telegraph Company was, in my opinion, weak from the beginning; and the fact, of which I have spoken, constituted a weakness which, I think, they never could have got over.

1356. In addition to that, is it not the fact that the Associated Telegraph Companies put down the rates to all those places at which they had competition with the United Kingdom Telegraph Company?—Yes.

1357. Keeping up the rates at all other places?—Yes.

1358. In fact, they attempted to run them off the road?—Quite so, and they never had the support they ought to have had from the public.

[The Witness withdrew.

William Saunders, Esq., called in; and Examined.

1359. *Chairman.*] You are Managing Proprietor of the "Western Morning News"?—Yes. *W. Saunders*, Esq.

1360. Were you appointed one of a committee on the part of certain newspaper proprietors to hold a meeting in Manchester to confer with the Post Office authorities on the subject of the Telegraph Bill?—Yes.

1361. When was that meeting held?—The committee held several meetings, and generally we considered the question of telegraphic communication for the Press.

1362. What were the views generally of the committee; were they in favour of this Bill?—In favour of the Bill.

1363. Were there many important newspapers represented?—The committee were appointed by several important newspapers, representing, generally, the list read by Mr. Taylor.

1364. You have heard Mr. Taylor's evidence as to the terms of the agreement with the Post Office for the transmission of news for the newspapers?—Yes.

1365. Do you agree with his views upon the matter?—I think that under these rates we shall be paying quite as much for the transmission of news as we are paying now; but I believe we shall get a better supply of news.

1366. Was there dissatisfaction expressed that there was no provision in the Bill for reducing the rate for the transmission of news?—A good deal of dissatisfaction was expressed, and it was thought that we ought to get a reduction in the rate equivalent to the reduction made to the public; but I think a little consideration satisfied the newspaper proprietors that they could scarcely expect that.

1367. When the Bill was first introduced, the newspaper proprietors generally thought it was necessary to watch the Bill with regard to their interests?—Yes.

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1368. They endeavoured to obtain from the Post Office information as to the position they would be in supposing the Bill were passed?—Yes.

1369. And having ascertained from the Post Office what the Post Office were prepared to do so far as the newspapers are concerned, who were represented at the meeting which appointed the committee, they are satisfied with the arrangements proposed?—After discussion, I think they are generally satisfied.

1370. Apart from the news which is supplied to you by the agency of the intelligence department of the Telegraph Companies, do you occasionally have special messages?—Yes, we get them; but rarely, for the rates for their transmission are too high.

1371. So that if you want to go outside the exact scheme of news provided by the Telegraph Companies, you have to pay a very high rate?—Yes.

1372. Is that practically found to be almost prohibitive?—Almost prohibitive; I find that 13 daily newspapers and 11 weekly newspapers during the last two months have received only about 48 *l.* worth of those telegrams; 25 papers in two months have spent only 48 *l.* in those telegrams for news from London.

1373. Do you think that under the reduced rates proposed by the Post Office you will frequently have recourse to special messages?—I am afraid we shall spend a great deal more then.

1374. Under the present system is it possible for a Telegraph Company, having the monopoly of the collection and transmission of news, to favour one particular side of politics at the expense of the other, with regard to the reports of the speeches of statesmen?—It is quite possible. I do not make any complaint on that head, but it is possible for them to do so, and in that case they would increase the reputation of one statesman and diminish that of another.

1375. There is no accusation against the companies for having done so?—None whatever.

1376. But still the system proposed by the Post Office would prevent any such thing ever being done?—Yes, it will throw it open to every newspaper to have just what speeches it liked.

1377. You would have exactly the article you wanted, and in the way you wanted it?—Yes, quite so.

1378. Mr. *Norwood.*] You have no fear that the Post Office are likely to adopt any arbitrary course towards the Press as soon as they became possessed of the telegraph system?—I should imagine that a clause would be introduced into the Bill to prevent that, and which would require that if they made a reduction of charge to one newspaper it should be applicable to all newspapers.

1379. Do you think it possible that they would withhold information from any paper upon any pretext?—I think that would be impossible, because the supply of information would be in our own hands, and if they delayed the transmission of it that would be a matter that would be instantly complained of.

1380. I mean this, would not it be possible for the Post Office to say, "We will not supply such and such a paper"?—I imagine that the Bill itself will compel them to supply papers on equal terms. At present the Telegraph Companies are not compelled to supply all papers on equal terms; they may supply particular papers or not, as they please, and on what terms they please.

1381. Has an instance of this kind come under your notice; have you ever heard of a case in which a newspaper proprietor purchased a paper, and when he became possessed of that paper and applied to the intelligence department of the Telegraph Companies for the usual supply of news, the reply made was, "Yes, but there happens to be an outstanding account with the former proprietor of your paper, and we must have that paid before we treat with you"?—That has happened twice to me personally.

1382. You were compelled to pay the debts of your predecessor as the price of obtaining information on the ordinary terms?—In the first case I discontinued the supply of news, and did not pay the claim. In the second case I was obliged to pay the claim.

1383. What did that amount to?—£. 77.

1384. You had to pay 77 *l.* of your predecessor's debt as a condition of your receiving the ordinary intelligence supplied to the newspapers?—Yes.

1385. Do you fancy that you may be treated by the Government in such a way as that?—I imagine that that would be impossible.

1386. You do not see that your independent position as a newspaper proprietor can be jeopardised by the Post Office becoming possessed of the telegraphic

phic communication of the country?—It would be very much improved; we should be able then to comment upon the Electric Telegraphs Bill. *W. Saunders, Esq.*

1387. Which you do not do with perfect freedom now?—We must be careful what we say now. 7 July 1868.

1388. Mr. *Potter.*] Did you ever hear of the Excise following goods for duty, though those goods might have changed hands three or four times, and the duty been paid upon them by each purchaser?—A case of that kind never came under my notice, but in the case I referred to, the Telegraph Company had no legal claim of any kind; it was an entirely arbitrary claim, and one which they could not establish in any court.

1389. Are you not aware that such things have occurred under the Excise Law?—The case you have mentioned might have occurred under the Excise Law, but no case similar to the one I have referred to could have taken place.

1390. Are you not aware that the Excise have been in the habit of doing such things?—I understand so, but no such case has come under my experience.

1391. Mr. *Turner.*] In the case alluded to by the honourable Member for Carlisle, the claim of the Government was a legal claim?—Yes.

1392. In your case it was an arbitrary claim, not a legal claim in any sense of the word?—Yes.

1393. Mr. *Goschen.*] The former proprietor was legally liable for it?—Yes.

1394. It was a legal debt, though recovered from the wrong person?—It was not a legal debt, so far as I was concerned.

1395. *Chairman.*] Had you purchased the undertaking, with its engagements and liabilities?—No; I did not undertake to pay the liabilities.

1396. Mr. *Goschen.*] Was it more unjust following you, when the debt had been incurred by your predecessor, than following a person in the possession of goods which had been bought from another person, upon which goods the Excise duties were owing to the Crown?—I cannot say about its being more unjust in the one case than in the other, but it is more illegal in my case than the other.

1397. *Chairman.*] Might it not have been the case, that the purchaser of the goods who had not paid the duty leviable by law, had had that considered in the price he had paid for the purchase?—It might have done, certainly; I had no idea of the debt existing.

[The Witness withdrew.

Dr. *Cameron,* called in; and Examined.

1398. *Chairman.*] ARE you Editor and Manager of the "North British Daily Mail"?—I am. *Dr. Cameron.*

1399. Is that paper published in Glasgow?—It is.

1400. You were also, I believe, appointed a member of the committee which has been referred to to-day, to consider the interests of the newspaper press in connection with this Bill?—I was.

1401. Is the rate proposed by the Post Office satisfactory to you as a newspaper manager?—Perfectly satisfactory.

1402. Have you considered the question of using special wires?—Yes, we use special wires now.

1403. What is the rate proposed by the Post Office for the use of a special wire?—£. 500 a year.

1404. For how many hours would you have the special use of that wire for that sum?—For 12 hours, during the night time.

1405. You work a special wire now?—Yes.

1406. How many hours do you have the use of it?—Eight hours, and we pay 750 *l.*

1407. Do you know how many morning papers published in Scotland have special wires?—Five.

1408. Do they each pay the same sum?—Yes.

1409. So that you would get an extension of time, and also a decrease of charge?—Exactly.

1410. Do the charges made by the existing companies for special wires vary according to the distance from the metropolis?—They do, according to a tariff.

1411. What is that?—Under 100 miles, 600 *l.* per annum.

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1412. Above 100 and under 200 miles 675 *l.* per annum?—Yes.

1413. Above 200 miles 750 *l.* per annum?—Yes.

1414. And to Ireland, including submarine cable, 1,000 *l.* per annum?—Yes; I understand that they have made a reduction, and that they now put it on the same footing as Scotland.

1415. According to your knowledge, are there more than five papers in the United Kingdom which have special wires?—There was a special wire introduced for one of the Dublin papers yesterday, in prospect of the Government taking the telegraph system.

1416. Do you think that more special wires would be used should the change now proposed become law?—I am certain of it.

1417. Can you give us the expenses incident to the working of your own wire?—The working of our wire costs for clerks' salaries 143 *l.* per annum, and allowing 7 *l.* for stationery, lights, &c., it will cost altogether about 150 *l.*

1418. If the working expenses are 150 *l.*, there will be a balance of 350 *l.* as profit?—Yes, to the Government, under the proposed change.

1419. To the proprietor of the wire who worked it himself, who paid the working expenses?—Certainly, under the new rate; but under the present rate there is a profit of 600 *l.* out of the 750 *l.*, which is above the working expenses, because at present we pay 750 *l.*, and we pay for the salaries of clerks, &c., 150 *l.*, and the difference is profit. The Government propose to give it for 500 *l.* per annum, and under the Government rate there would be a profit of 350 *l.* to the Government.

1420. Do you think that the use of special wires will become very general with newspapers?—That is my opinion, decidedly.

1421. Mr. *Goschen.*] Is there a proposal on the part of the Post Office to the newspapers to lease the special lines at 500 *l.*?—Yes; at present the lines are leased at 750 *l.*, and they propose to lease them to us for 500 *l.*

1422. That is not in the Bill?—It is to be inserted in the Bill.

1423. Are there to be enabling clauses?—Yes.

1424. Do you understand that those clauses are to take the place of the discretion at present resting with the Telegraph Companies?—Yes.

1425. So that it will not be in the power of the Post Office, as I understand, to modify the agreement afterwards; it will be regulated by Act of Parliament once for all?—With this exception, that the charges in the Bill are to be the maximum charges, as in the case of the general public; they will have the power of lowering, but not of increasing.

1426. That would be the only arrangement which the newspaper proprietors would be able to make with the Post Office?—No; they will have the power of joining the News Association, of which Mr. Taylor spoke; and they would have the power of getting what at present is supplied by the ordinary telegraphs, and which we get at present in addition to the news supplied by our special wire.

1427. There will be three channels open to the newspapers: there will be the ordinary public telegraphs; there will be the arrangement of the special wires for 500 *l.*; and there will be the arrangement to take the place of the existing intelligence department of the Telegraph Companies?—The second of the modes which you mention completely takes the place of the ordinary mode which is at present in vogue in Scotland, when the papers have special wires. There are two sources by which newspapers get news: the one, the intelligence department of the Telegraph Companies, the news from which is supplied to all the English and Irish newspapers at present; and the other, a special wire leased by them, the news transmitted along which is collected by the special staff of each paper in London.

1428. Are there besides those modes any special arrangements ever made at present by the newspapers with the Telegraph Companies?—The Telegraph Companies have also another contract for sporting news; we have that contract with them, too.

1429. Will the Government undertake to convey sporting news?—Certainly; but they will not undertake to collect it.

1430. When a speech is telegraphed, such as the speech made by Mr. Disraeli at Edinburgh, is there a separate contract made for the conveyance of a large quantity of words in one night?—That is extra. We pay for that

that at the reduced Press tariff; that is to say, 40 words instead of 20, by the ordinary tariff rates, and so much for reporting.

1431. What would take the place of that under the new Bill?—The fact that under the new arrangement messages will be sent between any two stations in the kingdom will simplify that matter, and knock those tariffs into one, in fact; instead of being obliged to get a thing of that sort on the account of one single newspaper, a number of newspapers could combine at any particular place, as well as in London; an associated Press arrangement could be entered into in any town.

1432. A permanent Press arrangement?—No; a temporary one.

1433. Will the Government have the power, according to your understanding, to convey on a special occasion a very long speech, by telegraph, at a reduced rate below 1 *s.*?—Yes, certainly.

1434. Do you anticipate that there will be a clause authorising the Government to do that?—Certainly; at present there is an agreement with the Telegraph Companies under which Mr. Disraeli's speech at Edinburgh was transmitted to Glasgow at 40 words for 1 *s.* to a single address, 25 per cent. being charged extra for each other address in the same town, and no reduction being made in case of additional addresses in different towns. Under the proposed arrangement the same speech would be sent at the rate of 100 words for 1 *s.* to a single address, and 2 *d.* per additional address; the additional address not being confined to the same town, but extending over the entire kingdom.

1435. That would be another clause to be put in the Bill?—No; the one clause would cover the whole thing.

1436. The Government would have three different arrangements with the Press; it will have a special wire with the 500 *l.*; then it will have the reduced Press tariff to which you have just been alluding; and thirdly, it will have its relations with the Press through the associations which are to be supplied?—The associations will be matters with which the Government will not concern itself; the Government are willing to transmit Press news, from any quarter, upon precisely similar terms.

1437. That is to say, for 1 *s.* per 100 words?—Yes.

1438. Is that to be the maximum charge?—Yes.

1439. That will be, in fact, one-fifth of the price at which the news is at present conveyed, will it not; I mean, at a fifth of the price for which it would be conveyed for the public?—Certainly.

1440. So that the Press will get its telegrams extremely cheap?—On the contrary, the price will be higher, so far as the ordinary telegram is concerned, than it is at present.

1441. With regard to the profit on the 500 *l.* a year, you assume 150 *l.* as the cost of working the wire and so on, and that the profit is 350 *l.*?—Yes.

1442. And of course, out of the 350 *l.*, you must take the cost of the purchase of the wire?—Precisely.

1443. And its proportion in the general plant of the telegraph establishments?—Yes; but as that expense would be incurred whether the wire is working or idle, that is a matter which may really be laid aside. At present, for instance, in going into Gresham House from whence our wire starts, at night we find that our wire is the only wire which is employed; there are numerous wires lying idle; the interest on the money has to be charged, whether those wires are working or idle, and the transmission of messages, so far as I am aware, does not in the smallest degree deteriorate the wires.

1444. Then you say this, that the number of wires is not required to be increased by the necessity of having a special wire for the Press?—On the contrary, I believe that they could accommodate ten times the number of papers which at present have special wires, without putting on a single additional wire.

1445. As a matter of fact, the special wire is used in priority for the paper that has hired it; but it is used for other papers as well?—If such a glut of ordinary public messages occur as to require the particular wire to be seized upon, it is used, and the Telegraph Companies remit us a charge in proportion to the amount of time for which they have seized upon our wire; but such a thing has never occurred.

1446. You never have had a credit against the 750*l.* you pay?—No.

1447. Mr. *Potter.*] Would the Post Office have power to make other special

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bargains beyond those which you have alluded to?—I am not aware that they would; the question was never discussed.

1448. Might not the necessity for other special agreements arise on behalf of the Press?—Possibly; I do not foresee it.

1449. You are not aware that they take power to make special agreements beyond that?—I am not aware that they do.

[The Witness withdrew.

Francis D. Finlay, Esq., called in; and Examined.

F. D. Finlay, Esq.

1450. *Chairman.*] Do you live at Belfast?—Yes.

1451. Are you the proprietor of the "Northern Whig" published there?—I am.

1452. Have you been in the habit of receiving telegraphic news for the use of your paper?—Yes, I have, since the commencement of telegraphic communication with Ireland.

1453. Do you find the present system is all that you would wish?—No, I do not.

1454. In what respects have you reason to complain of it?—My objections to it are threefold: I think it is inefficient in certain respects; I think it is too costly in certain respects; and I think that it has placed in the hands of Telegraph Companies a power which they have used in a despotic and arbitrary manner.

1455. We will take those points in order; why do you say that it is inefficient?—Because there are delays and errors, both of which are seriously inconvenient to us, in consequence of there being a submarine communication. The second point is, with regard that it is too dear; it is not too dear if the absolute number of words transmitted by the company be calculated in proportion to the amount annually charged; but the gross sum is too dear, inasmuch as they send us a quantity of matter which we do not require, and refuse to supply us with the quantity of matter which we do require. I can give instances, if the Committee wish it; they supply us with a quantity of foreign intelligence, derived through the agency of Mr Reuter, a considerable portion of which is so absolutely valueless to the Irish Press, that we do not even take the trouble to insert it; and for this supply of Reuter's foreign intelligence the Telegraphic Company insist, in spite of remonstrance, on very materially increasing our annual payment. With regard to home intelligence, the Telegraph Company will not give items of information which are of special importance. In illustration of that, I may mention, that when Lord Lurgan won the Liverpool Cup, they absolutely refused to tell me who the winner of the Liverpool Cup was, and I had to pay 3 *s.* for a message to Liverpool; to make my inquiry 3 *s.*, and 3 *s.* for the reply, though I knew of my own knowledge that the information was in the telegraph office at the time.

1456. Your readers are very often more interested in English sporting news than in foreign political news?—There are 10,000 people in Belfast who would wish to know that Lord Lurgan had won the Liverpool Cup for one who would wish to know what had passed in Bulgaria.

1457. You think that the Post Office would transmit news to you about the Liverpool Cup, if your agents sent it to them, quite as readily as they would transmit news about anything happening in a remote foreign country?—The Post Office would make no distinction in the matter; we would supply the news, and the Post Office would transmit it without regard to its character. The third objection to the existing system is, that the action of the Telegraph Company is despotic and arbitrary, inasmuch as, by the combination, the companies have acquired an absolute monopoly of the news supplied, whereas a broker who is not satisfied with the Magnetic Telegraph Company can send his messages to the country and to London by the Electric Telegraph Company. The newspaper proprietors can make no selection. I have my contract with the Magnetic Telegraph Company. I am not, and have not been, satisfied with that company, but I cannot be supplied by any other Telegraph Company. In consequence of the combination, there is no competition in the transmission of news.

1458. Can you give any instance of the exercise of that despotic action on the part

part of the company?—I can. On the 8th of June I wrote an article in the "Northern Whig," in which I supported the Bill at present before the Committee. I spoke of the advantages of it to the public and to the Press, and I made a very severe complaint of the manner in which the Press had been dealt with, winding up by saying that we (speaking in the name of the paper) did not attempt to conceal our personal desire that we should be relieved from the pressure which we had submitted to for so long. On the 13th of June Mr. Boys, the superintendent of the Intelligence Department, wrote to me a letter.

1459. Have you that letter?—I have a copy of it.

1460. Will you read it?—"Intelligence Department, Telegraph Station, Telegraph-street, London, E.C. 13 June 1868. Dear Sir,—I will submit to the next meeting of the directors the article in your journal of the 8th instant. I have never received from you any complaint of errors, &c., and if you had made them every case would have been carefully investigated. The printed attack is, therefore, most unjustifiable. Your assertion that the charges are exorbitant is at direct variance with the statement you made to me when last in London. The time appears to have arrived when the directors should seriously consider whether the contract with your journal should be continued, and I have no doubt they will come to a decision which may afford you an opportunity of making your own news arrangements on less exorbitant terms. I am, dear Sir, faithfully yours, Charles V. Boys."

1461. Had you any means of making other arrangements than those through the company whose representative wrote that letter?—The only alternative open to me would have been to engage a special wire to Belfast, for which I should have had to pay 1,000 *l.* a year, and to organise a news collection of my own, which might have cost anything up to 5,000 *l.* a year; so that if the Telegraph Company had carried out this threat they might have ruined me, provided I could not afford to pay 6,000 *l.* additional for my expenses. That is the alternative that was presented to me.

1462. So that the company had the power, if they wished it, of saying you should not receive telegraphic news unless you took a certain line in your paper on particular questions?—Yes; to controlling my action in the management of my newspaper.

1463. Is that a condition of things which could be tolerated by the editor of a newspaper?—It is a condition of things which I should not tolerate at any rate, and I should think it would be intolerable to any man of independence.

1464. Sir *Frederick Heygate.*] Do any Irish newspapers have special wires?—When I left Ireland, this day three weeks, no Irish paper had any special wire, but as I have heard it stated by a witness this morning, one Dublin newspaper yesterday took a special wire, I suppose in anticipation of this Bill passing. The charge of 1,000 *l.* a year has been prohibitory.

1465. Do all the Belfast papers have the same arrangement?—All the Belfast papers have the same arrangement, except that the daily papers pay double what the tri-weekly papers pay.

1466. Is the information furnished to them exactly of the same description?—The information is the same in all cases.

1467. In the same words?—In the same words.

1468. Can you tell me whether the circulation of your paper has much increased since the introduction of telegraphic communication?—The circulation of our paper has very much increased, but I cannot say whether it is due to telegraphic communication or not. With regard to special matters of interest, such as the Queen's speech at the opening of Parliament, I can say that the desire to purchase papers at such times is not so great since the telegraph has been established as it was when the news came by ordinary expresses; we have not so large a sale on an occasion of that kind as we had in former days before the telegraph was established.

1469. Is not it a matter of notoriety that the circulation of all papers in Ireland, and in Belfast especially, has very much increased of late years?—The circulation of Dublin papers, of Cork papers, of Belfast papers, and with few exceptions provincial papers generally has increased very largely, principally owing to the reduction of price; they are all penny papers; the circulation of papers in small country towns I believe, generally speaking, has very much decreased, that is probably due to the competition with the cheap daily papers.

1470. You do not think that the increase in the circulation is due to the facilities

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facilities which are afforded for the transmission of intelligence by the telegraph?—Not entirely; that may be an element in our advance, but it is not that entirely.

1471. Do you publish telegrams of speeches delivered in the House of Commons?—Yes, every morning,

1472. Those telegraphic reports are very largely read, are they not?—They are very largely read; probably there is no portion of the intelligence which is read more largely.

1473. Do you publish full reports of those speeches afterwards?—We go back upon the reports furnished by the London papers for the purpose of extracting speeches which are of importance.

1474. Have you any means of knowing that those full reports are read by the public afterwards?—That is a thing which no newspaper proprietor can tell, because he cannot reason from a few instances; but a considerable number of instances occur in which we are asked to go back upon the full reports, and where we are told, "We are very glad you did give so and so's speech in full." With regard, for instance, to the discussion on the Irish Church, which is a matter of paramount importance in Ireland, we have gone back and given those speeches in full.

1475. You say that when a telegraphic report of a speech is published, it is very largely read?—Yes.

1476. Then is it not of the greatest importance that that telegraphic intelligence should be perfectly accurate?—Naturally.

1477. For this reason, that when the full report is published afterwards, if it is published at all, the public do not read it; do you believe that that is a true conclusion?—No, I do not. I believe the public do read the full reports published afterwards, because what is published afterwards is not the whole report which appears in the London papers, but extracts of such speeches as are of paramount importance.

1478. Do those telegraphic arrangements ever fail owing to accidental causes?—Occasionally, but not frequently.

1479. How many times in the course of a year are you prevented from obtaining your telegrams?—Half a dozen times in the course of a year; due to natural causes, electrical disturbances, and violent tempest.

1480. When that happens, your arrangements are very much impeded?—We have then no telegraphic information supplied to us.

1481. Do those accidents arise from there being only one submarine wire at work?—I believe there are two submarine wires at work.

1482. Was not it the case that during a portion of last winter only one was available?—I have no recollection of such being the case; as far as my knowledge goes there is one from Whitehaven to Larne, another from Port Patrick to Donaghadee, and another from Kingstown to Holyhead, but that third has been broken for a long time, so that there are only two available. The entire communication with Ireland comes through Belfast.

1483. If your arrangement is with one company, if anything happens to the submarine wire which that company works, I suppose the whole of your telegraphic intelligence is put a stop to?—If anything happens to that wire we cannot possibly have communication.

1484. You say there are two wires; your arrangement being with one company, if the wire worked by that company fails, the whole of your intelligence comes to an end?—Both the wires, I believe, are in the hands of the Magnetic Telegraph Company. I am giving hearsay evidence now, but the general opinion is that those wires belong to the Magnetic Telegraph Company.

1485. Is it your opinion, from your knowledge of public feeling in Belfast, that this purchase by the Government would be looked upon as a great benefit to Ireland?—I do not think it is a case of special benefit to Ireland more than any other part of the United Kingdom.

1486. The more remote the district is from London, the greater the advantage to it of telegraphic communication?—Naturally so.

1487. Therefore the benefit to Ireland would be greater than to parts of the United Kingdom nearer to London?—The benefit to Ireland would be very considerable. As it is proposed to reduce the charge for special messages, it would be an advantage to those who take special messages, and also as it is proposed to reduce

reduce the price for commercial messages, it would be a great benefit to the mercantile public.

1488. Are the public of Belfast satisfied with the present telegraphic arrangements?—They are not satisfied with them.

1489. On what ground?—On the ground of irregularity.

1490. Is the rate in Ireland similar to that in Great Britain?—No; for a telegraphic message from London to Belfast the cost is 3 *s.* for 20 words.

1491. What is the charge for a similar distance in this country?—I think 2 *s.*

1492. Can you give any reason why there should be that difference?—I cannot, but they say that the submarine cable is the reason.

1493. Is there any greater expense in working a submarine cable than a land wire?—No greater expense in working it, but a greater expense in laying it down.

1494. Do you think that there has been an increase in the use of telegraphic communication in Ireland of late years?—I have no knowledge upon that subject.

1495. What is your opinion of the advantage to Ireland of the proposed uniform 1 *s.* rate?—I cannot conceive, looking at it from a public point of view, that it can be otherwise than most beneficial. I think every facility for intercommunication should be established between the two countries, and that Ireland should be brought as much as possible into connection with the United Kingdom, and, therefore, the more facilities in the way of communication we have the better.

1496. How many hours after the publication of the "Times" newspaper does it arrive in Belfast?—The earliest way by which it can arrive is by Dublin; coming by Dublin, it arrives at Belfast at four the following morning; that is to say, Monday's "Times" arrives in Belfast at four o'clock on Tuesday morning, but it is not available till the morning's delivery, between eight and nine.

1497. Are your Belfast papers published very early in the morning?—At five o'clock in the morning.

1498. What is the latest telegraphic news you are able to give?—The House of Lords divided at 29 minutes to three on the Suspensory Bill, and that was published in the Belfast papers the next morning.

1499. Within four hours of the event, in fact?—Yes; it is not at all an unusual thing for me to see an announcement of the adjournment of the House 50 minutes after it has taken place.

1500. So that you are able to inform your readers of what has occured within four hours after it has taken place?—Yes.

1501. If they had simply taken a London paper, they would not have known it for 24 hours afterwards?—That is so.

1502. Therefore, a good system of telegraphic communication is of paramount importance to a place at such a distance from the metropolis?—It is of paramount importance to the North of Ireland, and of every great importance, but not of paramount importance to Dublin, because the London papers arrive in the evening, so as to be available for the newspapers published the next morning. In the North of Ireland, without telegraphic communication, we could not give intelligence of what took place in London the preceding night.

1503. The purchase of this telegraphic system by the Government, and the charge of a uniform rate, would be an inestimable advantage to the North of Ireland?—It would be a very great advantage, indeed.

1504. Mr. *Goschen.*] Is the minimum cost of a telegram from Ireland to England 3 *s.*?—The minimum cost for a public message is 3 *s.*

1505. For 20 words?—Yes.

1506. So that the 1 *s.* rate, as proposed, would be a great boon?—An immense boon to the public.

1507. It would be a greater reduction in the case of Ireland than in the case of the United Kingdom at large?—Yes.

1508. The average payment in England being 1 *s.* 11 *d.*, and in Ireland the minimum being 3 *s.*, of course the pecuniary benefit to Ireland would be greater than to any other part of the United Kingdom?—Unless there be a 3 *s.* rate north of Edinburgh; if there be such a rate north of Edinburgh, of course the benefit to that part of the United Kingdom would be precisely the same as to Ireland.

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1509. Would you be afraid of the Government stopping the transmission of messages altogether in certain emergencies?—I have no apprehension of the kind, because, in the first place, I have too much confidence in the Government generally, and in the next place, I think that such a course of proceeding, if they were to attempt it, could be defeated. Take the case of an election, for example. It is possible for election news and instructions to be sent through the Post Office in a manner that would defeat any possibility of espionage.

1510. I was thinking of a case where the Government might think it desirable, on the ground of political troubles, to suspend the telegraphic communication for a time between the two countries. Would you have any apprehension that that might take place?—I can speak from an illustration on that point. At the time of the Fenian rising in the south of Ireland, the wires were taken possession of by the Government according to the authority given to them by the Electric Telegraph Consolidation Acts, where a certain amount of inconvenience arose to the public and the Press; but it is an inconvenience which we must all submit to in times of political disturbances.

1511. Under what power was that done?—I cannot quote the chapter or section. I believe there is a section in an Act of Parliament giving the power.

1512. This is the 52nd section of chapter 112 of the 26th & 27th of Victoria, "Where in the opinion of one of Her Majesty's Principal Secretaries of State an emergency has arisen in which it is expedient for the public service that Her Majesty's Government should have the control over the transmission of messages by the company's telegraphs, the Secretary of State, by warrant under his hand, may direct and cause the company's works, or any part thereof, to be taken possession of in the name and on behalf of Her Majesty, and to be used for Her Majesty's service, and subject thereto, for such ordinary service as may seem fit, or may direct and authorise such persons as he thinks fit to assume the control of the transmission of messages by the company's telegraphs, either wholly or partly, and in such manner as he directs. Any such warrant shall not have effect for a longer time than one week from the issuing thereof, but the Secretary of State may issue successive warrants from week to week as long as, in his opinion, such emergency continues." There the precaution is taken that a warrant must be issued under the hand of the Secretary of State, and only for a week, in order as it may be presumed, to guard against the contingency of the Government taking the telegraphs into its hands for too long a time. Would you, as supplying news to the public, like to see that security diminished. What I mean is this, would you like to see this Bill pass without its being provided in the Bill that that should only be done for a given space of time, and with certain very stringent formalities?—I should have no objection to such a clause.

1513. You would think that if the Government were to be in possession of the telegraphs, it would be necessary to provide that the Government should not suspend the transmission of messages for the public, unless certain formalities were taken similar to those prescribed in the section I have read, namely, that it should be done under the warrant of the Secretary of State?—I am certainly of opinion that a clause similar to that should be re-enacted in the present Bill. I think it is desirable that such a security should be taken in the Act to be passed.

1514. You would not give the Government free power to stop the transmission of telegrams whenever it should choose to do so?—Not without the formalities required by the section you have read.

1515. In your opinion, as a proprietor of a newspaper, it would be desirable to take stringent precautions against such a suspension of the working of the telegraphs?—I have not given any consideration to this point. The suggestion is new to me; but on the first thought of the matter, I can see no objection to the power that the Government possess at present, and no more, being continued to them in future.

1516. You would not give the Government greater discretion in stopping the transmission of messages than it has at present?—Certainly not.

1517. It would be dangerous to give them more power?—It might be.

1518. Sir *Frederick Heygate*.] Did the power used by the Government during the Fenian disturbances cause any inconveniences to the Press?—Of course it did.

1519. To what extent?—In my own case to this extent: I was obliged to send

send a reporter from Belfast to Dublin to ascertain what news he could get, and bring it with him by the return train. *F. D. Finlay*, Esq. 7 July 1868.

1520. The regular supply of news from the intelligence department was suspended?—The internal supply of telegraphic news was suspended.

1521. For how long a period?—I think for half a day; I speak under correction.

1522. Was it only on one occasion?—Within my recollection, only on one occasion.

1523. Mr. *Norwood.*] Suppose the Government get possession of the telegraphs, and it was found that the Post Office did not transmit news to the papers in that satisfactory way you could wish, and you wrote a leading article complaining of it, and rather smartly animadverting upon it, would you expect to receive such a letter as you received from Mr. Boys?—Certainly not; I should be very much surprised if I did.

Mr. *John Merrick*, called in; and Examined.

1524. *Chairman.*] You are connected with "Bell's Life," are you not?—Yes. Mr. *J. Merrick.*

1525. With any particular department?—The turf department.

1526. I suppose in relation to the turf department you require great secrecy in the intelligence transmitted to you?—Yes.

1527. Have you been in the habit of communicating and receiving private and confidential telegrams?—Yes.

1528. Have you been in the habit of making use of the telegraph for the purpose of such confidential information?—I have.

1529. For 16 years?—For nearly 16 years.

1530. Have you found that the wires have been tapped in order to get at your confidential communications before they reached you?—I have never known an instance of it.

1531. Have you found that the clerks employed by the Telegraph Companies have ever divulged turf secrets on their way to or from you?—I never heard an instance of it; if we had, we should certainly not have employed the line any longer.

1532. Is there the strongest inducement to people to find out those secrets?—There is. I have never had the least reason to suspect any divulgence of our messages.

1533. There would be a greater inducement to divulge those messages than almost any messages ever sent?—I should say there would occasionally.

1534. Mr. *Goschen.*] Are the messages often sent in cipher, or not?—Yes, and sealed.

1535. You say you would not employ the line any longer; have you any choice?—We have only employed the Electric Telegraph since I have been engaged on the paper, and had there been any case of any divulgence, or any complaint whatever of any tangible kind, I do not think that the proprietors would have employed the Electric Telegraph Company any longer, inasmuch as the other would be open to them.

1536. *Chairman.*] What was your means of communication before telegraphs existed?—By coaches and pigeons, in the general way.

1537. The telegraph wires have driven out the pigeons, I suppose?—Yes, it was high time, the pigeons were often shot.

1538. Mr. *Goschen.*] Have you any contract with the Electric Telegraph Company?—I believe we have, inasmuch as I never pay for messages, and I know that the proprietors settle periodically with the company.

1539. You do not know what your contract is with the Telegraph Company?—There is simply a reduction for our messages.

1540. Are you confined to sending messages by one company?—To one particular company; I have a pass, which I tear out of my book.

1541. You pay so much a year for that?—Yes, I do not know the amount.

1542. Mr. *Norwood.*] You are satisfied with the way in which your messages have been sent by the Electric Telegraph Company?—Yes, I do not say that there has never been any complaint, but if there has been any complaint, it has been

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been only on a Friday, when perhaps, there has been a little delay in the delivery of the message.

1543. You will not benefit by any proposed change, because you seem to be satisfied with the present state of things?—I have no feeling whatever upon the matter.

[The Witness withdrew.

Thomas Allan, Esq., called in; and Examined.

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1544. *Chairman.*] WHAT are you?—A Civil Engineer.

1545. Have you given your attention to the subject of electric telegraphy for a great many years?—I have.

1546. Have you taken out patents for improvements in electric telegraphs?—On various occasions.

1547. As long ago as 1850?—Yes.

1548. You obtained an Act of Parliament in 1851?—I obtained an Act of Parliament in 1851.

1549. What was that for?—For the purpose of working my patents; antecedent to 1852, under the Patent Laws Amendments Act, you could not work a patent with more than 12 parties; you required an Act for that purpose, as also to get power to interfere with the streets.

1550. Was there a company formed in 1853 to work your patent?—There was.

1551. But it did not succeed?—The public did not respond sufficiently to it. Professor Wheatstone was the scientific referee, and he joined us in that case, and we proposed to carry messages at 1 *d.* a word, and supply separate wires for mercantile firms and for newspapers, as is done now.

1552. In 1854 did you submit some papers to the Government through Mr. Rowland Hill, the Secretary of the Post Office, showing reasons for the Government working the telegraphic system in connection with the Post Office?—Yes.

1553. That is the paper appended to Mr. Scudamore's report laid before the House?—It is.

1554. Did you submit the same views to Lord Stanley of Alderley and to Mr. Ricardo?—I did.

1555. Had Mr. Ricardo been a Director of the Electric Telegraph Company?—Mr. Ricardo had previously been the Chairman of the Electric Telegraph Company.

1556. And did both Mr. Ricardo and Lord Stanley of Alderley coincide with your views?—Very much so, indeed, especially Lord Stanley of Alderley; that was in 1860.

1557. In 1860 you started the United Kingdom Telegraph Company, you revived the company of 1851, did you not?—Yes; we were enabled, under the New Companies Act, 1856, to bring out a registered company.

1558. You registered it under that Act?—We registered it under that Act, embodying, as we understood, the powers of the special Act of Parliament previously obtained in 1851.

1559. Was your object to establish a system of telegraphy at a low uniform rate irrespective of distance?—Yes.

1560. And you proposed to charge a shilling rate?—Yes; we did not presume to go too far down at first.

1561. What was the result of your starting this Company for conveying messages at a shilling rate upon the action of the existing companies?—It brought the value of their shares down very much; they were very sore upon the subject, and they gave us the most determined opposition.

1562. In what way did they deal with their rates; did they make a reduction?—Not at once.

1563. Did they afterwards?—They did afterwards.

1564. Did they reduce all their rates to 1 *s.*?—No.

1565. Did they reduce any of their rates to 1 *s.*?—Only to places where we went.

1566. Wherever you were in competition with them they reduced their rate to 1 *s.*, and where you were not, they kept up the old rates?—Yes.

1567. Was the effect of that, that you were unable to compete against them?—The

—The effect of that was, that the United Kingdom Telegraph Company gave up the shilling rate; I was separate from them at that time.

1568. You left them?—I was separate from them.

1569. The effect of the action taken by the other companies, was to prevent the United Kingdom Telegraph Company carrying out their plan of a uniform 1 *s.* rate?—Apparently so.

1570. Has there since that time been an understanding between the principal Telegraph Companies as to the rates at which they should work?—I believe so; the same as existed between the two other companies previously.

1571. The result has been, that the public have not had the advantage of the cheaper rate?—Precisely; the United Kingdom Telegraph Company by their second Act applied to Parliament to be allowed to do away with the shilling rate, and by a clause inserted in the Act the maximum was allowed them of 2 *s.*: and another clause was put in to preclude them from selling themselves to existing companies; but, nevertheless, the competition is more apparent than real.

1572. Do you think that, unless the Government take the telegraphs into their hands, there is much prospect of a considerable reduction in the rate?—I do not think there is much prospect of a considerable reduction in the rate from the manner in which the present companies have worked telegraphs, more especially as they look to dividend and not to carrying out the system as a consumers' question.

1573. Do you think any other company could be started for conveying messages at lower rates, which would compete with the present companies and drive them into a reduction?—As an illustration of the difficulty, I may mention that after the United Kingdom Telegraph Company fell away from the uniform rate, I gave notices to Parliament of a new scheme, calling it the National Telegraph Company; and of course I have to bide my time till an opportunity shall arise to get in the thin end of the wedge; of course if the Government adopt the telegraph system and charge a uniform rate, it is quite clear that any project of mine must fall to the ground.

1574. It has been said that the failure of the United Kingdom Company, to make the 1 *s.* rate remunerative, is a proof that the Government will not succeed in making the 1 *s.* rate remunerative; what do you say as to that?—There has been a great deal said upon that lately, and without much reason, as it seems to me.

1575. Will you give your reasons for differing in opinion to those who have advanced that proposition?—My view of the reduction of rates in telegraphy is, as has been the case in newspapers and the penny post, that the traffic increases in geometrical ratio inversely to the reduction of the traffic; and the great principle in telegraphy here would be to get the million for your customers; to establish social telegraphy as well as commercial telegraphy. Hitherto the telegraph has been a luxury, but if the charge were reduced, and if it were a uniform rate, easily understood and worked, and managed by the public as the Post Office system is, then, no doubt, it would increase in the geometrical ratio I allude to.

1576. At present the class of persons who use the telegraphs are those who use them for their commercial gains?—Precisely.

1577. For pecuniary objects?—Yes.

1578. Do you think if the rate were considerably reduced, that the telegraphic system would be used for the transmission of messages between friends, for messages relating to the state of health of persons even?—Yes; the Post Office in out-lying districts have a machinery already existing. The Post Office system would act as an auxiliary to telegraphic communication.

1579. Do you think persons in remote districts would use the telegraphic wires to any great extent?— No, not to a very great extent; but it would be a great benefit to them if they could.

1580. Do you think if they had very cheap telegraphic communication at their doors they would be induced to use the telegraphs for purposes for which they now never think of using it?—Yes; supposing it was 6*d.* from Dumfries to London, for instance.

1581. Persons who have a difficulty in writing letters would have less difficulty in going to the telegraph office and sending a message to a friend than writing a letter?—Very much less.

1582. You think, as regards the transmission of money, it might be made use

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of?—Yes, I think there would be a great advantage in it in that respect. In fact, there is so strong an analogy between the telegraph and the Post Office that one cannot but see that the one dovetails into the other. The Post Office can do a great deal more for the public in telegraphy than the companies ever can do.

1583. Mr. *Goschen.*] Have you considered whether the Government should have a legal monopoly like it has in the Post Office?—Certainly, I think it should have.

1584. You think that preferable?—Yes.

1585. *Chairman.*] Would you like to see it laid down in the Act of Parliament that nobody but the Post Office should work telegraphs?—Yes.

1586. Mr. *Goschen.*] If it were not so, the Government would simply have bought the existing telegraph lines, leaving anyone the power of competing, if they chose to compete. Supposing they charged a uniform rate, do not you think that you would be able to start a company to take some of the plums away from the Government without going into outlying districts which would not pay?—No; people who subscribe for shares want high dividends; you would not be able to do it in competition with the Government, that is, if the Government do it as it might, could, and should be done. They would not have a chance.

1587. You are in favour of a uniform rate?—Yes.

1588. That means to say a rate that would be cheap for the thinly populated districts, but relatively dear for the thickly populated districts?—The one pays for the other.

1589. It is to be a self-supporting system, I presume, in your opinion?—Yes.

1590. Therefore, the thickly populated districts must pay for the thinly populated districts?—Yes, that is the case with the penny post.

1591. And therefore, in the thickly populated districts, you must put a charge higher than the actual cost, in order to cover the deficiency upon the others?—Yes; the working expenses would be heavier upon the weak districts than upon the strong.

1592. Therefore, you must put the charge in the strong districts rather above the cost, in order to make up the deficiency in other places?—You must average it.

1593. Therefore, you would have a margin in the thickly populated districts for competition against the Government. Take London, for instance, where you have a 1 *s.* rate, 6 *d.* might pay in London, why should not a company undertake to do it for 9 *d.*, and so undersell the Government?—I do not think that they would have the chance of underselling the Government; that is one of the points where the Government can carry out telegraphy so much more cheaply than a company.

1594. You admit that in London the Government must charge more than the cost, in order to cover losses in unremunerative districts; so that there must be a margin?—Yes.

1595. Therefore, in thickly populated places the charges would be larger than the cost?—Yes, there must be a profit.

1596–7. That profit would leave a margin for competition, surely?—The margin for competition is very small; the Government can raise their capital at so small a cost, as compared to companies, that I am afraid we would not get anybody to subscribe.

1598. If you can send a telegram for 6 *d.*, and you can charge 9 *d.* for it against the Government's 1 *s.* rate, would not that 3 *d.* offer a margin for competition?—I do not see how a Telegraph Company could pay in such a small area; it must be comprehensive. It is the difficulty of getting the thin end of the wedge in.

1599. Are you aware that if private parties were to be allowed to carry letters in London, they would be able to do it for far less than 1 *d.*?—They might.

1600. And, therefore, they are prohibited; in fact, it has been tried with circulars, to deliver them for a halfpenny?—Yes.

1601. The law prohibits them from doing that; would not you require a law prohibiting the same thing as regards Telegraph Companies?—I would have the law with regard to Telegraph Companies the same as with regard to the Post Office,

Office, to preclude that being done, to preclude parties picking out the plums. I do not apprehend it is likely to occur.

1602. It is not likely that competition might occur, but it would be right to make it illegal in your opinion?—Certainly.

1603. I understand you that there is a project of yours that would be practically shelved by the Government undertaking the business, buying up the companies?—Yes.

1604. Would you be able to carry out that project, if the Government did not buy the companies?—If I could raise the money.

1605. Would you be able to show fair dividends?—Yes, I think I should.

1606. Would you object to stating what kind of dividend you would feel yourself justified in holding out?—When one comes in competition with the Government one's chances are not so good.

1607. *Chairman.*] Have you the prospectus?—(*The Witness handed one to the Committee.*)

1608. Mr. *Goschen.*] I presume that this embodies a scheme which, in your opinion, is practicable?—Yes.

1609. That scheme is as follows: "The object of the National Telegraph Company is to organise and establish a network of electrical communication throughout Great Britain, to convey messages at a low and uniform rate, a sixpence for a short message, or some equivalent charge, on principles analogous to the postal service." That is the statement in your prospectus?—Yes.

1610. "To effect this, the Company have secured Mr. Allan's systems in electro-telegraphy, by the adaptation of which there will be an estimated economy of from 40 to 50 per cent. in first cost and working expenses, as compared with the systems now in use?"—Yes.

1611. If this Bill is not passed, you can, in your judgment, establish a system by which the public would have almost the same advantage as by the Government scheme, at a cost of 6 *d.* per message?—Yes.

1612. And that is at a cost of 100,000 *l.*?—That is a mere beginning.

1613. Can you state the capital which you think would be necessary?—I think 500,000 *l.* would make a very complete thing.

1614. Then I understand in your judgment this scheme being practicable it would be knocked on the head by the Government plan, the Government plan being to spend about 4,000,000 *l.* in buying up the other companies with the result of transmitting telegraph messages for 1 *s.*?—Yes, but though the charge put in that prospectus of mine is 6 *d.*, I do not tell you the gauge of the messages. I do not think the present system of gauging messages is suitable for the general community; my 6 *d.* may not be a half of your 1 *s.*

1615. Would it be less or more?—I want to systematise it; I should propose that it should be 15 words for 6 *d.* including the address, that is not so much below the 1 *s.*

1616. Conceive your company to have found the money, what would probably be the effect of the starting of your company upon the shares of the other Telegraph Companies?—In 1860, when we were advertised before the public, and when our project was greatly discussed in the Press, and we were buoyed up with a great deal of hope, there was not a Telegraph Company at a premium.

1617. Therefore the fact is, that if we had only waited till your company had been in existence, all the other companies might have been bought up infinitely cheaper?—In the course of events something of that kind might have happened; we ourselves might have amalgamated.

1618. The other companies, by the Government purchasing them at this moment, escape from the competition which you would have established if you had been successful?—Yes, they escape that competition; they escape the competition of my company if it could ever have been brought into existence.

1619. And you believe it could?—It is a question of money.

1620. You believe that it could with the same confidence as you answered the questions put to you by the Chairman?—Only there is very great difficulty now in getting money.

1621. I understand you to say that, according to your view, it is possible that the Telegraph Companies might have been exposed to a very serious competition?—They would have been some day; if the opportunity I have been waiting for had occurred, I should certainly have commenced it, and the opportunity I was

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waiting for was that I might begin the undertaking on a very small capital, and then go for the complete affair.

1622. Do you not think that the Government is paying 4,000,000 *l.* for an object which you would have accomplished without any payment of that kind?—I do not say that the 500,000 *l.* is going to complete the whole thing in the manner in which Government is going to carry it out. I was going to pick out the plums, and only go to places where I was going to get the most business I was not going to the Land's End.

1623. Because you thought it would never pay?—The profits would melt away to pay the working expenses in such parts.

1624. You have no objection to the Government going to the Lands' End whether it pays or not?—I think if the Government take it up and carry it out as a consumers' question, and not with a view to profits and dividends, it can be done at a very much cheaper rate than it is done now. There might be a cheaper tariff and more facilities afforded to the Press, and to all the members of the community availing themselves of it, and the Government might make a profit of it.

1625. Are you a proprietor of any patents at this moment?—Yes.

1626. What will become of your patents if the Government carry out their scheme?—If the Government do as some others have done, negative everything in the shape of improvement, the patents will die their 14 years out, and there will be an end of them.

1627. Have you found that the companies have bought your patents?—No, they are very averse to doing the like of that. I am obliged to start a company myself to work my patent.

1628. As you cannot start a company for carrying out your views, you think the Government had better do it?—I must grin and bear it. At the time I made my proposition in 1854 the Government did not listen to the scheme, except so far as has been stated; then we tried to carry it on under the United Kingdom Company, and that fell through. I still stick to the principle that it is a good thing yet. There is no reason why these propositions of mine should not be part and parcel of what the Government are going to do.

1629. The Promoters, by calling you to establish their case, show that they have more confidence in your views than the public appear to have?—Yes; I cannot get the public to subscribe money in these times.

1630. *Chairman.*] Has the prospectus ever been issued?—No; after the United Kingdom Company went from the principle of uniform rates, I published the necessary notices in 1862 for an application to Parliament.

1631. Was this prospectus framed in 1862?—Not that identical one, for I have modified it.

1632. When was this one prepared?—About two years ago.

1633. You have not thought that the money market was in such a favourable state as to enable you to bring it out?—During the last two years it has been almost impossible for anything of that kind to be done.

1634. Mr. *Goschen.*] This is a competition hanging over the Electric Telegraph Companies at this moment?—I have my improvements and patents, and I believe great benefit would have arisen to the public from the adoption of them.

1635. Mr. *Turner.*] As I understand, the public have not coincided in your opinion as to the great promise of this company, so far as subscribing their money to it goes?—It has been very well supported by the Press. On the various occasions that it has been brought forward there has been no aid to the discussions which there have been upon it, but the public have not subscribed to it; and we can understand when the other companies were paying no dividends, it was enough to keep people from going into an undertaking of a similar nature.

1636. In the face of the associated companies at present existing, the public have not had sufficient confidence to subscribe money to your scheme?—I have not tried them.

1637. You have had no promise of money so far?—I have not tried to put the scheme forward the last two years owing to the state of the money market, and also I have been waiting for an event that would give me a stepping-stone by which I could bring the matter forward.

1638. You estimate that the Government could work the telegraph system much

much more efficiently and much more cheaply than any private company?—Decidedly.

1639. Then, if you have had any difficulty hitherto in getting any money, you would not think that there would be much probability of your raising money for a purpose of this kind if the Government take up the telegraph system?—Certainly not; I should give it up as a bad job.

1640. Therefore, as far as any question of competition between you and the Government goes, you would consider that quite hopeless?—Quite.

1641. I think you have been asked whether a shilling charge would leave a margin in remunerative places, and whether there would not be in those places room for competition with private companies; would not that margin be much less in the hands of private companies than in the hands of the Government; would not the expense of private companies be much larger than the expense to the Government?—I should think the expense to private companies must be much larger.

1642. Therefore, though a private company might work under a shilling, there would be less inducement for such a company to enter into competition with the Government?—They would stand very little chance.

1643. For instance, though it might pay the Government to carry on telegraphic communication between large places for less than 1 *s.*, if they had not, at the same time, to carry on telegraphic communication with unremunerative places, it does not follow that it would answer for a private company to work under a shilling rate between large places even?—I do not think that a sufficient dividend could be shown to induce people to put their money into such a private company.

1644. The Government being able to raise their money so much cheaper, not asking for any dividend beyond the interest of the money, do you think even between large places it would be difficult for private persons to compete with the Government?—I do not think it would be possible.

1645. The more circumscribed the area of any company, that is, if they merely went to very large places, the greater would be the proportion of general expenses?—Yes.

1646. There is a certain staff of officers required in the business of all Telegraph Companies, which would be the same, or nearly the same, whether you worked merely to large places or whether you worked over the whole kingdom?—Yes; at the same time, the Government, in carrying it out as a whole, would adopt different plans for different lines; for outlying districts they might adopt a slower and simpler affair.

1647. The general staff being the same, the additional expense to the Government of going to outlying places would be additional posts and wires and the expense of the agents who might be required in addition to the postmasters at the different places?—Yes.

1648. The expense to the Government at these outlying places would be much less than to private individuals?—Yes.

1649. Many of those outlying places would pay their expenses to the Government when they would leave a large loss to private companies?—Precisely; the Post Office would become an auxiliary to the carrying on of telegraphic communication to such places.

1650. Mr. *Goschen.*] You say that the cost to the Government is less; that the Government could raise the money cheaper than a company?—Yes.

1651. Have you not omitted this element, that the Government is paying a large sum for the goodwill, whereas the company would not pay anything for goodwill?—If Government were to start like a commercial undertaking, and to go into competition with other companies, they would do them an immense deal of injury; but I do not apprehend that the Government would consider that that was a fair principle to enter into competition with private enterprise.

1652. Mr. *Turner.*] Looking at the whole general bearing of the question, is it your opinion that the Government working at a reasonable uniform rate would have nothing to fear from private companies entering into competition with the Government for the supply of large and populous places?—Nothing whatever, even at a higher price than that at which they are proposing to buy up the existing rights. I do not see that the Government would have anything to fear. I believe

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believe there would be a large margin over, sufficient to allow the Government to create further extensions or make reductions of the tariff.

1653. In fact, the efficiency and economy with which the Government would work would be such as to defy all competition?—Yes.

1654. Greatly to the advantage of the public?—Much to the advantage of the public in a variety of ways, not saying anything against the working of the present companies, because the telegraph system in Great Britain is, as far as despatch goes, superior to anything on the Continent.

1655. Sir *Frederick Heygate*.] The Honourable Member for London seemed to imply that this Bill would benefit the country places at the expense of the towns, because the receipts in the towns would make for the loss in the country; do not you think it advisable that a close sympathy and community of interest should exist between all parts of the country?—Certainly.

1656. Mr. *Potter*.] If you were the adviser of the Post Office would you suggest a sixpenny rate?—Yes.

1657. You think that would be perfectly safe?—Yes; but not for 20 words and the address.

1658-9. The object of uniformity is to make it a great facility to the community generally; the principle would be to reduce it; following the analogy of the penny post as much as possible, would you have a uniform rate for a less quantity of words?—Yes, I would start it so that there would be no confusion and no need for going to the telegraph office and counting words. I would have it 6 *d.* for 15 words, which should include the address. Thousands and thousands of messages would be sent if a small price were charged for a few words.

1660. You would charge more for 25 words?—For every 15 words another 6 *d.* might be added.

1661. That would not be a reduction of half the proposed rate?—It would be less than the 1 *s.* rate, because it would be giving 30 words instead of 20 and the address; and the 6 *d.* rate throughout the towns would quite preclude all competition.

1662. Mr. *Leeman*.] To what towns in the country did you intend, with the capital of 500,000 *l.* you have spoken of, to extend your system?—It would have begun with Edinburgh, Glasgow, Manchester, Liverpool, Newcastle, Leeds, York, Hull, Birmingham, Sheffield, Portsmouth, and Bristol.

1663. And London?—London, of course.

1664. You would have started in London and comprised all the large towns in the country?—Yes, in direct circles.

1665. And you would have done all that for 500,000 *l.*?—Yes, not to carry it out as the other companies have carried out their systems.

1666. Supposing at this moment you were to commence this project of yours, and you had 500,000 *l.* in the bank to begin with, you could, for 500,000 *l.*, connect all the towns you have now spoken of?—I believe I could, with a certain number of wires, not to the extent that the existing systems go.

1667. You commenced the United Kingdom Company?—Yes.

1668. You were connected with the United Kingdom Company?—At first I was.

1669. Did you prepare the prospectus?—I prepared the prospectus of the original United Kingdom Company.

1670. However, you have seen the prospectus in Mr. Scudamore's Blue Book?—Yes.

1671. Your capital then was 150,000 *l.*?—Yes.

1672. With which capital you proposed to connect London, Birmingham, Manchester, Liverpool; then London again, through Northampton, Leicester, Nottingham, Sheffield, Barnsley, Wakefield, and Leeds, to Hull, and across through Bradford, Halifax, Rochdale, and Huddersfield, to Manchester and Liverpool; then to Cheltenham, Gloucester, Bristol, Bath, Plymouth, Newport, Swansea, and Cardiff, in the West and in South Wales, and to Stockton, Sunderland, Newcastle-on-Tyne, the Hartlepools, the Shields, Edinburgh, and Glasgow, &c., in the north, and in Scotland?—Yes.

1673. Did the United Kingdom Company carry its lines to all these places?—Excuse me, that is not the original prospectus of the United Kingdom Company.

1674. But

1674. But I have read it from the "Prospectus and Periodical Reports of the United Kingdom Company," as published in the Blue Book?—This is the original prospectus as published (*handing the same to the Honourable Member*); we did not say that we were going to all those places.

1675. Did the United Kingdom Company propose to go to all those places that I have read to you from the prospectus in the Blue Book?—I cannot tell what they proposed to do; that was after I left the company.

1676. Did they, in fact, go to all those places?—I cannot say; I have not watched to what places they went.

1677. What amount of money did the United Kingdom Company raise?—It got such a floorer at first, that the amount raised was a mere bagatelle.

1678. How much, in fact, did it raise?—Only 10,000 *l.*, I think.

1679. How was it then that it managed to spend 143,000 *l.*?—It raised the money afterwards.

1680. I am not particular as to when it raised the money, but in truth it did raise it?—I was not connected with them when they raised the money afterwards.

1681. Your plan when you commenced the United Kingdom Company was this uniform 1 *s.* rate?—Yes.

1682. And in the first prospectus that was put out was this statement made: "The company has already secured upwards of 600 firms and individuals, on the above basis, in the large telegraphing towns, and this number is being daily added to"?—That is not the original prospectus; that is a subsequent prospectus of the company, I presume, after it got its second Act of Parliament.

1683. The statement here was that the whole system would be erected for 150,000 *l.*?—That is their statement; it is not my statement.

1684. Was this a part of their statement: "By the adoption of an uniform single rate of charge, on the admirable principle of the penny post, not only will existing telegraphic business be greatly augmented, but a new class of customers will be called into existence"?—Yes.

1685. "Tradesmen requiring the immediate supply of goods will find it advantageous to spend 1 *s.*, where the margin of profit on orders renders the present rates prohibitive. The simplicity and uniformity of charges will greatly induce persons to telegraph who are at present deterred by the uncertainty of the cost as well as by its amount"?—Certainly.

1686. I am afraid that the experience of the United Kingdom Company did not realise those statements?—Whilst they did work at 1 *s.* I should rather think it did. I have heard from many people that when the thing was at 1 *s.* they sent many telegrams to Birmingham and Manchester; but when they raised the prices they fell off.

1687. Do not you know that the United Kingdom Company went on for four years without paying 1 *s.* dividend?—I do not know that they have paid a dividend yet.

1688. Not till the last year, however?—I do not know.

1689. How do you account for there having been no dividend, if all the world was to use it at 1 *s.*?—A variety of reasons. They certainly went from the basis upon which we intended to work. My proposal was to work a class of instruments that would have made a saving. That has not been adopted.

1690. Is this statement true, made by the United Kingdom itself: "For a period of four years the Company persistently sought successfully to establish this important principle of lowness and uniformity of charge; but at the termination of this period circumstances compelled the Company to depart from the basis chosen, and to adopt that of a tariff graduated by distance"?—I suppose so.

1691. That was the experience, at all events, of the United Kingdom Company?—Yes.

1692. They then made alterations, did they not, which brought back the charge to 1 *s.* for 100 miles, 1 *s.* 6 *d.* from 100 to 200 miles, and 2 *s.* beyond 200 miles?—Yes, subsequent

1693. In the Act of Parliament which they obtained, they applied for powers to alter their rate?—Yes.

1694. Upon those charges they have been proceeding since?—Yes.

1695. The company say, "Since the alterations made in the charges for messages, this company has taken up its proper normal character as a business

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concern, working for the mutual benefit of the proprietors and the public, and last half year, excluding temporary loans, the company fairly earned an amount of profit equal to 6 per cent. dividend over the whole of its share capital." That is rather a different result to what it was with the 1 *s.* rate?—The 1 *s.* rate never got a chance.

1696. It never paid the company a dividend?—No. There may have been other reasons for not paying a dividend; the scheme is not the original scheme; they have been playing "Hamlet," with the part of Hamlet left out; they had not the proper tools to work with.

1697. Is this statement true: "In the month of May, the extension of the lines of the United Kingdom Telegraph Company to Scotland was completed, and the reduced tariff of 1 *s.* came into operation upon those long circuits, and in the course of the summer in different other districts. The further experience thus gained of the practical result of a uniform tariff of 1 *s.*, irrespective of distance, fully confirms the opinion always expressed by the directors as to its unremunerative character. The effect in the case of this company has been to absorb a very large portion of the increased revenue in unavoidable useless expenses; was that the result of adoption of the United Kingdom Company's scheme?—That is in the report of the Magnetic Telegraph Company.

1698. Yet you are of opinion now that this uniform 1 *s.* rate is to pay in remote districts?—Yes, it must be done as a complete affair.

1699. You have said that for 500,000 *l.* you could put your system into all the towns between London and Scotland?—To a certain extent.

1700. To an extent that would serve the districts?—To an extent that would serve the purposes of the company.

1701. And the purposes of the public living in those districts?—Yes, to a certain extent, for that sum of money; you would not lay a complete system, because there are a quantity of other wires in existence in competition with you; you cannot secure the whole of the traffic to yourselves; *ergo* the capital you are going to expend is not to do the thing *en grand*, as a whole.

1702. How much more would you add for the additional wires that would be necessary to do it grandly?—It would take twice as much and more.

1703. Another million?—Yes, to do it completely.

1704. First of all, you would have the posts to lay down for the incomplete system?—If you adopt the principle of going by wires and posts.

1705. The scheme propounded by this prospectus which you have handed in, upon which you are seeking to raise a very large capital, would have been a perfect thing. You, as an old electrician, would not have put out an imperfect thing?—No.

1706. So that you would have what would, in truth, connect all those towns for half a million of money?—To a certain extent.

1707. Do you mean that having connected them to a certain extent it would require another million to improve it?—No; it would take another million to supply the other wires in the hands of the other companies.

1708. Of course, for the 500,000 *l.* you got from the public, you would have expected to have given them a perfect article?—Yes; but I did not expect to get all the traffic.

1709. I am speaking of the apparatus by which you are to supply telegraphic communication throughout the whole of those districts; you could have put up the plant for 500,000 *l.*?—I could have put up a plant for that.

1710. Do you mean that you would have got 500,000 *l.* from the public, and then you would have told them that you must have another 1,000,000 *l.*?—Yes, supposing I bought the other companies; I am only going in for a certain portion of the traffic.

1711. You are going in for that which 500,000 *l.* would enable you to do in the first instance, imperfectly if you like?—It is not imperfectly; but it is only for a portion of the trade.

1712. It would enable you to compete with everybody else?—It would enable me to compete with the other companies.

1713. With the 500,000 *l.* you could to all those places compete with the Post Office?—I could compete with the Post Office.

1714. For 500,000 *l.* you could put up telegraphs in all the range of districts you have been describing, and compete with the Post Office to-morrow?—I could compete with them, but would it pay me? That is the important thing.

1715. If

1715. If you had 500,000 *l.*, you could put down a plant to enable you to compete with the Post Office or anybody else within the range of districts which you have described?—I could go and spend my money, but would it get a dividend?

1716. Whether it would be commercially wise for you to do it is not what I am inquiring about; but could you put down a plant, and connect all those towns for 500,000 *l.*?—To a certain extent.

1717. To an extent that would enable you to compete with the existing companies?—Not if the existing companies came down with their tariff.

1718. Assume the existing companies to retain their present tariff, and you to go on with your 6 *d.* for your 15 words?—Yes; but my 6 *d.* is not the half of their 1 *s.*

1719. Taking your 15 words for 6 *d.*, you could compete with the present companies if you had half a million of money with which to lay down your system?—Yes.

1720. If you could compete with them why should not you compete with the Post Office, if the Post Office are to charge 1 *s.* and you only charge 6 *d.*?—But my 6 *d.* is not the half of your 1 *s.*

1721. Take it a third more if you like; if 500,000 *l.* would make a plant for this purpose why should not you be able to compete with the Post Office at 1 *s.*, if your principle be true, that as you decrease the price you increase the number of consumers?—Because the Post Office can carry on their trade at a smaller margin than a commercial concern. If a company cannot show the public 5 or 6 or 8 per cent., they will not join in the scheme.

1722. Supposing you had the money on the table, have you any doubt that you could put telegraphs down in the districts I have named and make a profit?—I might put them down and make a margin of profit upon them; but if the Government took the telegraphs, and were carrying them out properly, I should think three or four times over before I carried out such a scheme.

1723. Do not you know that 75 per cent. of the whole of the money that is received now for telegrams is taken from 15 of the towns of the country, which large towns comprise the towns to which you have proposed to go?—Precisely.

1724. Is not one-half of that 75 per cent. received from London?—I do not know.

1725. Have you read this Blue Book?—Yes.

1726. Is not it there stated?—It may be so.

1727. Assume that 75 per cent. of the whole receipts by the telegraph companies is received in 15 towns, of which one-half is taken in London, do you really believe that the extension of the telegraphs into remote districts will enable the Post Office to get what will pay them upon your showing, if they are to give four millions of money?—I think that the supply of telegraphic communication to outlying districts is a matter of great importance.

1728. I am addressing myself to the financial question. If 75 per cent. be taken from 15 towns, and you could to the whole of those 15 towns give telegraphic communication for 500,000 *l.*, do you believe when the Post Office is to give 4,000,000 *l.* for the telegraphs, you could not successfully compete with the Post Office, not only in respect of those towns, but throughout the whole of the kingdom?—I do not think that I could. I think that if the Post Office has the management of the thing properly it would totally preclude anyone from attempting it.

1729. Mr. *Norwood.*] Your 500,000 *l.* would merely enable you to communicate with the towns which you referred to, not with adjacent villages?—Yes.

1730. Could you give the Committee anything like an idea at what cost you would be able to make a communication *de novo* from London to the stations which the Post Office propose at once to open if they were to get this Bill. If I recollect rightly, they propose at once to open something under 4,000 stations; have you any idea of the cost of the plant that would enable them to do that if they started *de novo*?—I have not looked into that question.

1731. Would it be 4,000,000 *l.*, do you think; could you for 4,000,000 *l.* make a complete communication between London and all those proposed stations?—I should think that for 4,000,000 *l.* of money, beginning *de novo*, you could carry out a complete system, such as is proposed by the Post Office, going to outlying or non-paying districts for their benefit, upon the same principle as the penny post.

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1732. Of course the Post Office stations at present would act as telegraph stations?—Yes; that is why I say the telegraph system is an auxiliary to the telegraphic system; the Post Office can go to outlying parts more cheaply than a private company could.

1733. £.4,000,000 would be an ample sum, you think, to start *de novo* to do that business?—Yes.

1734. You have expressed an opinion in favour of legal monopoly; you are not very strong upon that, I presume; you do not think that it is absolutely necessary for the good working of the telegraphic system by the Post Office to give them a legal monopoly?—I think that if the Post Office carry out the thing proposed as it should be, and might be, they need not fear the slightest competition.

1735. Therefore there is no necessity for Parliament going out of its way to grant a monopoly which, in fact, the Post Office do not ask for?—If I am asked my own private opinion, I do not see any need to give them a monopoly. If I were the Post Office I would not be afraid of competition.

1736. After all, it may be a desirable thing to retain in the hands of the public the possibility of competition in case the work was not properly and adequately done?—It may.

1737. You do not see the advantage of a legal monopoly practically?—I cannot see that the Post Office need be at all afraid of any competition. If they did the thing rightly and properly, I believe there would be ample margin after paying all expenses, and such an ample margin as would admit of further facilities being given to the public, either by extensions or by reductions.

1738. As to the advantage which the inhabitants of remote country districts would have in a uniform system, that advantage does not rest with the inhabitants of the country districts alone. Suppose that a Londoner wanted to telegraph to Berwick or the Orkneys, the Londoner would have as much benefit as the man who received the message?—Yes, it applies to both.

Mr. *Rodwell* was heard to state that, with regard to secrecy, the Promoters proposed to introduce into the Bill a provision analogous to that existing in the Post Office Acts, making it a misdemeanor to intercept a message.

[The Witness withdrew.

[Adjourned to Thursday next, at half-past Eleven o'clock.

Thursday, 9th July 1868.

MEMBERS PRESENT:

Colonel Fane.	Mr. Leeman.
Mr. Goschen.	Mr. Norwood.
Mr. Graham.	Mr. Potter.
Sir Frederick Heygate.	Mr. Charles Turner.

THE CHANCELLOR OF THE EXCHEQUER, IN THE CHAIR.

Frank Ives Scudamore, Esq., called in; and further Examined by Mr. *Rodwell.*

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1739. I WANT more particularly to call your attention to the financial arrangements; I think you stated the other day to the Committee that in various foreign countries the reduction of the rate of charge had always been followed by a very large and immediate increase in the number of messages?—I did.

1740. For the sake of your future evidence, will you just recapitulate them?—I said that in Belgium, in 1863, a reduction of 33 per cent. in rate produced an immediate increase of 80 per cent. in the number of messages. That in 1866, in the same country, a drop of 50 per cent. in the rate produced an immediate increase of 85 per cent. in messages. That in Prussia, in 1867, a reduction of 33 per cent. in the rate was followed by an increase, in the very first month after the change, of 70 per cent. in messages. That in France, in 1862, a reduction of 35 per cent. in the rate was followed by an increase of 64 per cent. in messages. I added that the most remarkable illustration was furnished by the experience of Switzerland in the first three months of this year. The Swiss inland rate was reduced by 50 per cent. upon the 1st of January this year, and in the first three months there was an increase of 90 per cent. in the number of inland messages over the corresponding three months of the previous year.

1741. And you added that the remarkable fact was that those increases had all taken place directly the reduction had been made?—I did.

1742. What inference do you draw from that?—That reductions of rate immediately draw into the use of electric correspondence a large number of additional persons.

1743. Have you any facts with regard to the experience of English Telegraph Companies which lead you to believe that the same result would follow in this country, or indeed has followed?—At page 140 of my reports on this subject, you will find a statement showing that when the gross average charge to the public for a single message by the Electric Telegraph Company was 2 *s.* 1½ *d.*, the net revenue was 80 per cent. greater than when the average charge to the public was 2 *s.* 10½ *d.*, and in the course of the day I will put in a statement, if possible, taken from the experience of the Electric Telegraph Company for the present year, showing that, whereas there is very little increase indeed in their high rate of messages from week to week, and only a trifling increase in the medium rate messages, the increase in the messages they carry for 1 *s.* goes on enormously from week to week.

1744. How do you arrive at the figures you have given of the average payment for messages?—By dividing roughly the total number of messages into the gross receipt.

1745. You have applied the same rule to both sets of figures?—Yes.

1746. Have the Post Office, in their own business, had experience of reduc-

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tions of rate?—Of course we have the experience derived from the introduction of the penny postage; it is unnecessary to give illustrations of that because it is so well known.

1747. With regard to the increased accommodation you have given to the public by establishing receptacles for letters in various parts, what do you find from that?—We find that increasing accommodation invariably leads to a very great increase of the business; during the last few years we have very largely increased the number of receptacles for letters by the establishment, not only of additional post offices, but of pillar boxes, throughout the country.

1748. Do you find where a pillar box is introduced in the vicinity of a post office there is any sensible diminution of the work done at the previously existing post office?—No, the pillar box makes its own business for itself

1749. Have you figures to prove that fact?—I have; in the year 1863 we had 15,200 receptacles for letters, and we had 640,000,000 of letters posted in them, that is at the rate of 42,000 letters for each receptacle. In the year 1867 we had 17,200 receptacles, and we had 774,000,000 of letters posted in them, that is at the rate of 45,000 letters for each receptacle, being a net increase of 3,000 letters posted in each receptacle for letters.

1750. It might be urged that the increase of population was the cause of that; have you made a calculation of the number of letters to each head of the population at those different periods?—Yes; the proportion of letters to the population had increased in a greater ratio than the population. At the end of 1867 there were 26 letters to each head of the population; at the end of 1863 there were only 23 letters to each head of the population.

1751. Can you give another illustration from the Post Office of the mode in which increased accommodation increases business?—The penny postage was introduced in 1840, and it is natural to suppose that the force of the reduction upon the letter-writing population had pretty nearly expended itself in 13 or 14 years from that time.

1752. What was the number of letters delivered in the United Kingdom in 1853, as compared with those delivered in the year 1844?—The letters delivered in the United Kingdom in 1853, when compared with the letters delivered in the year 1844, showed an increase of 168,000,000.

1753. I presume those figures you have given are from published papers?—Yes; they have been presented to Parliament over and over again. During the 10 years between 1844 and 1853, some extensions of accommodation were carried out by the Post Office, and some additional facilities were given to the public, but the main stimulus to correspondence during that period must be found in the effect of the penny postage. There were some reasons I need not enter into here which caused the growth of the accommodation given by the Post Office slightly to stagnate between 1844 and 1853.

1754. Between 1854 and 1863 did you then introduce as many as 5,000 more receptacles for letters?—Yes, they were increased by 50 per cent.; the number of additional receptacles was 5,000. That was done chiefly by the introduction of pillar letter-boxes which came into use about the beginning of 1854. During that time also 10,000 places in the rural districts were for the first time provided with a free delivery; that is to say, they were brought absolutely within the penny postage. Many accelerations of mails were carried out, the course of post between important places being considerably reduced, and greater opportunities being afforded for replies. The metropolis was divided into districts, and the number of collections and deliveries in those districts largely increased.

1755. You have just stated that the increase of 1853 over 1844 was 168,000,000, was it the fact that in the years from 1844 to 1863 the correspondence was increased by 191,000,000?—Yes, there was a growth of increase in the second decade over the first of 31,000,000 of letters.

1756. You consider that the increase due to the reduction of the postage had developed itself fully at the end of 13 years, but you say that the increase of accommodation between 1853 and 1864 had a great deal to do with that increase?—Yes.

1757. It is not all attributable to the simple reduction, but to the increase of

accommodation?—It is reasonable to suppose that the reduced rate must have lost its force in a few years after the reduction.

1758. You infer from those figures, that if a reduction in the charge for telegraph messages takes place, and there is also an increase of accommodation, the same result will follow?—Yes.

1759. Do you consider that there is a close analogy between the system of sending messages by telegraph, and sending letters by post?—I think there is a close analogy between the desire of correspondence by the public in the one way and the desire of correspondence in the other.

1760. You have another illustration to give in regard to the effect of increased accommodation, viz., the post office savings banks?—Yes, that is a very remarkable illustration.

1761. They were established in 1861?—They came into operation at the end of that year.

1762. At the end of 1861, what was the increase of depositors in the old savings banks, over the number at the end of the year 1860?—The depositors in the old savings banks at the end of the year 1861 had increased upon the number at the end of the year 1860 at a rate of less than 1 per cent., at the rate of 8-8ths per cent.

1763. In the six years following the introduction of the post office savings banks, what has been the increase?—I ought to say that the number of depositors in the old savings banks had for several years prior to the establishment of the post office savings banks increased at a very low rate, in fact it had remained nearly stationary; but in the six years which followed the establishment of the post office savings banks, the whole number of depositors in the old savings banks and those in the post office savings banks together increased at an average annual rate of 6½ per cent.

1764. To convey that to the minds of the Committee in another way, is it the fact that, before the introduction of the post office savings banks, there was only one savings bank depositor to every 18 persons of the population, whereas now we have throughout the kingdom, taking the post office banks and the old banks together, one depositor to every 14 persons of the population?—It is so; and in order that I may show that it is strictly the post office savings banks which have caused this addition to the number of depositors, I may mention that the number of depositors in the old savings banks has been constantly going down as ours has gone up; but the two sets of banks together have increased at the rate of 6½ per cent. per annum in six years, as compared with an increase of 1 per cent. in several years before.

1765. Is it the fact that your rate of interest is lower than that given under the old savings banks?—We only pay 2½ per cent., and the old savings banks paid 2 *l.* 18 *s.* 4 *d.* per cent. on the average.

1766. Can you attribute that increase to any cause at all except to the increased facility and accommodation afforded by the post office savings banks?—The increase is attributable to the fact that we brought banks close to the homes of the people, and kept them open at hours extremely convenient to them.

1767. Before the savings banks were adopted by the Post Office you were consulted as to the probable financial result of that scheme?—I was.

1768. And you then, as now, had to go into very large figures, I think?—I had.

1769. In 1861 did you first go into the question of the estimates of the cost at which the business would be carried on?—Yes, in a report which I wrote for the Chancellor of the Exchequer on the 7th of January 1861, before the Bill was introduced into Parliament, I assumed that the Post Office, after the establishment of the post-office savings banks, would at a very early date have to deal with as large an amount as was then being done by all the old savings banks in the kingdom.

1770. What was the amount of deposits in the old savings banks at that time?—All the old savings banks in the kingdom at that time had between them in round numbers 1,600,000 deposits, and 800,000 withdrawals per annum; in all, 2,400,000 transactions.

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1771. Upon what assumption did you make your calculations?—I calculated that we should at a very early date have to deal with an equal amount of transactions to that at that time attained by all the old banks; and having calculated what it would cost us to carry on that business in the country and in the central office, I came to the conclusion that each transaction would on the average cost us 7 *d.*

1772. Was that report of yours published?—The report which I have just now referred to was printed and circulated largely, but not put before Parliament.

1773. Did you, as soon as you had the materials, make a calculation as to what the actual cost had been?—Yes, at a very early date we did reach the number of transactions I had estimated, and our average cost per transaction has never exceeded 7 *d.*

1774. There were certain persons, then, croakers I may call them, who thought that you had made rather a preposterous estimate?—Yes, they thought I had over calculated the magnitude of the business to which the post-office banks would attain, and I was requested to base my estimate on 100,000 transactions instead of 2,400,000.

1775. Did you then arrive at the same estimate of 7 *d.*, and was that printed in the Parliamentary Papers?—It was printed in the Parliamentary Paper, No. 523, of 1861.

1776. When you stated that 7 *d.* would be the cost, what were you told would be the inevitable cost?—When the Bill was before the House, we were going to take the minimum deposits of 1 *s.*, and we were going to allow 1 *s.* to be withdrawn, and it was urged, if we were going to do business of that kind, and every 1 *s.* put in and every 1 *s.* drawn out was to cost us 7 *d.*, it must entail an enormous loss upon the country, and I was obliged to make a variety of other calculations before I could satisfy my superiors that we should not sustain a loss.

1777. Have your calculations been confirmed by a Return moved for by Mr. Ayrton, a balance sheet of the post-office savings banks for the year 1867?—Mr. Ayrton, in the November Session, moved for a balance sheet showing the balance due to depositors, the amount of expenses remaining unpaid, the value of securities at the cost price, less depreciation of those terminable by lapse of time, the amount of cash in hand, and the dividends accrued but not received at the end of the year 1867, and the surplus or the deficiency of funds to meet liabilities on the 31st December 1867.

1778. What mode of valuing the securities did you adopt?—Of course, the valuation of the securities is a very essential portion of an estimate of that kind; indeed, upon that depends altogether whether your assets will meet your liabilities or not, and Mr. Ayrton himself prescribed the mode of valuing them.

1779. Mr. Ayrton was rather opposed to the scheme, was he not?—Mr. Ayrton had for a great many years taken a great interest in the old savings banks; he was trustee of one of the largest savings banks in the kingdom, the St. Martin's Savings Bank, and he had always predicted that the post-office savings banks would entail a loss upon the country, and no doubt, in prescribing the mode in which we should value our assets, he took care to make it as stringent as he could.

1780. The balance sheet was prepared by the Commissioners for the Reduction of the National Debt?—Yes.

1781. What was the result, after the working of six years, with an average cost of 7 *d.* per transaction?—That balance sheet showed that at the close of the year 1867, after six years' working, at an average cost of 7 *d.* for each transaction, there was a surplus of funds to meet all liabilities to the amount of 143,910 *l.*

1782. It had been remunerative to that extent?—Yes.

1783. You had earned that?—Yes; I do not mean to say that it could have been realised; we had a fair right to conclude that it was there.

1784. Will you state the figures that came before you in making those calculations and estimates, and in dealing afterwards with the amount of business done?—The figures which led up to this balance sheet which I have just described were these; In the six years there had been 7,000,000 deposits and 2,000,000 withdrawals; I am speaking of the number of transactions; we had taken 21½ millions

millions of money from depositors, inclusive of the interest payable by us to them, and 11,800,000 *l.* had been withdrawn by them; 1,383,000 accounts had been opened, 529,000 accounts had been closed, and there were remaining open 854,000 accounts upon which there was due to depositors 9,800,000 *l.*

1785. That shows an enormous increase in the business?—Yes.

1786. In 1861 you had, as you told us, estimated the cost of the banks, and also their probable magnitude?—I had.

1787. That was fully confirmed by subsequent events?—Yes.

1788. I believe you made a report, conjointly with Mr. Chetwynd, to the Postmaster General, in 1862, upon the working of those savings banks?—Towards the close of 1862, when I had had nine months' experience of their working, I had to make a report of the probable growth of their business to the Postmaster General, in order that we might provide a sufficient establishment to carry them on, and which report was printed and circulated; the following passage occurred in that report: "Assuming that business continues to come in at the same rate only, for the rest of this year, there will be 175,000 accounts opened in all the post-office banks at the close of the year, and assuming that business continues to come in at the same rate only in future years, there will be at the end of the year 1874 nearly 1,600,000 accounts opened in all the post-office savings banks." Now, at the end of the year 1867, that is with seven years unexpired of the term over which my prediction extended, there were 855,000 accounts already opened, and the annual rate of increase, if it merely maintains its present amount, will bring us to my estimated number of 1,600,000 accounts at an earlier period than I had expected to reach it.

1789. In arriving at the probable cost of the working of savings banks, will you state what data you had to go upon in addition to the data and information which you derived from the old savings banks?—I was able to obtain some data from the experience of the old savings banks, but the most valuable data in my possession were obtained from the records of the money-order office which at that time had, and still has, a very much larger amount of business, if that business be reckoned by the number of transactions, than either the old savings banks, or the post office banks, or both together had ever had.

1790. You have told us the number of transactions in the savings banks, will you tell us what, in the year 1860, was the number of money-order transactions in the Post Office?—The number of money-order transactions in that year was nearly 12,000,000 as compared with rather less than two millions and a half of transactions in the old savings banks.

1791. What is the profit at which the money-order office is conducted?—The money-order office is conducted at a profit of 30,000 *l.* to 40,000 *l.* per annum.

1792. Do you attribute the success of the money-order system and the savings-bank system to the facilities which have been extended by you from time to time?—I attribute the success of those institutions entirely to the fact that we give facilities for the receipt and transmission and the deposit and withdrawal of money at places within an extremely easy distance of the persons wishing for such accommodation.

1793. Carrying out that analogy, do you think that the same result will follow in the case of persons who want to send telegraphic messages?—I have no doubt of it.

1794. The charge for money orders is by no means low?—No; the money-order commission, that is the charge paid by the public for the transmission of money orders, cannot be called low; it is about a half per cent. for a draft payable at sight and drawn in any part of the United Kingdom on any other part of the United Kingdom.

1795. With regard to savings banks, and with regard to money-order offices, you have been dealing with very large figures, and in both those instances your prophecies have been fulfilled?—They have.

1796. With regard to the use of the money-order office, is there anything in the usage of that by the poorer classes and by small tradesmen which leads you to think that people of that class will more largely use the telegraph?—The

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money-order office was originally established merely to enable poor people to send money from one part of the country to the other with ease and at low charges. I should tell you that 40 years ago, long before we thought of post-office savings banks or money-order offices, or Government insurance offices, Mr. Whitbread brought a Bill into Parliament, which passed a second reading, to establish money-order offices, post-office savings banks, and post-office insurance offices, solely for the benefit of the poorer classes; and when the money-order office was established 28 years ago, it was designed simply to benefit them; it never was supposed that it would become the important element in the trade and commerce of the country which it has become. It is really the backbone of the retail trade throughout the country. I can, perhaps, best illustrate that by saying that fish, and game, and vegetables, that come from distant parts of the country to large towns, are almost invariably paid for by money orders. Large sums are remitted annually to the Scilly Islands, and to different parts of the coast of Scotland and Cornwall, for vegetables, and fish, and game.

1797. You have applied this accumulated experience of yours upon those two subjects connected with the Post Office to the probable result of reducing the price of telegraphic messages, and giving the public a very large amount of increased accommodation in sending messages?—I have.

1798. Mr. *Sargood.*] You have already made two or three different estimates of the probable amount of revenue to be derived from the telegraphs?—I have; but in making them up to the present time, for want of sufficient data, I have been in some respects merely groping in the dark. I have known, of course, what has been the effect of reductions or of increased accommodation abroad; but I have not till now been able to obtain data as to English correspondence precisely analogous to that given in the report of foreign telegraphic administrations.

1799. I think the foreign telegraphic administrations have a sort of mixed business which we have not here; that is, they have inland international correspondence as well as their local correspondence, and also transmit messages?—They have, and they distinguish the number of those messages in their periodical reports; in some cases they work out very elaborately the average cost to them, and the average produce to them, of each kind of message.

1800. The Board of Trade Returns sent in by the Telegraph Companies in this country, I think have not distinguished the various classes of business, have they?—No; they have furnished no precisely corresponding data to those furnished by foreign telegraphic administrations.

1801. So far as you have used them for your earlier calculations, you have not had that minute information which was advisable?—No.

1802. Has your constant communication with the companies since the Bill has been launched enabled you, with their assistance, to go more minutely into the returns of their business?—Yes.

1803. So as to enable you to get, with considerable approximation to accuracy, at the different items of their revenue?—Yes. It is not only that the English companies have not distinguished the messages, but their half-yearly accounts have shown, under the head of gross revenue and in one sum, the produce of inland and continental messages, the sums paid to them for news, the rent paid to them by news-rooms, and, where they exist, by railways, and some other matters of that sort. Having no means of distinguishing the different parts of the gross revenue, I have hitherto taken it all as the produce of the inland messages, and by dividing the whole number of messages into the produce, have arrived at what I was obliged to assume to be the average produce of an inland message.

1804. You have already recapitulated the foreign experience of increased business on a reduction of rates; let us now have the data of the English rates on which you have founded your calculation?—The rates in England vary with the distance. The companies have a 1 *s.* rate for a distance not exceeding 100 miles; a 1 *s.* 6 *d.* rate for a distance exceeding 100 and not exceeding 200 miles; a 2 *s.* rate for a distance in Great Britain exceeding 200 miles, and a rate ranging between 3 *s.* and 4 *s.* for messages between Great Britain and Ireland. Of course, in estimating the effect of our proposed uniform rate of 1 *s.* in increasing

creasing correspondence the first element for consideration is what number of messages will be affected by the reduction.

1805. Then you, having made an estimate of the number of messages, would strike out from that so many as you think represent at this moment the 1 *s.*?—Obviously the messages for which the 1 *s.* is charged now will not be touched at all, so far as the reduction of rate goes, by our proposed plan.

1806. As regards the 1*s.* 6*d.* rate, of course your proposition is to reduce it 33 per cent.?—Yes.

1807. And as regards the 2 *s.* rate, to reduce it 50 per cent.?—Yes.

1808. And as regards the rate ranging between 3*s.* and 4 *s.*, by your proposition it will be reduced 70 per cent.?—Yes, you may take it at 70 per cent.

1809. Till recently you have not had the means of ascertaining the number of messages of each of those classes?—I have not.

1810. Have the companies now given you facilities for obtaining that information?—They have enabled me to separate the number of messages of each class.

1811. Having acquired that knowledge, will you tell the Committee the result of it in figures?—I will put in by-and-by a tabular statement giving the result of my estimates of revenue and expenditure; but perhaps it will be more convenient if I state to the Committee each item of that estimate now, and give my reasons for putting it in.

1812. In the first place we must start with the amount of business that would be transferred to the Post Office. How long will it be, do you think, before you will be likely to acquire the telegraph business of the country?—I do not think it can possibly be in working order before the 1st July next year.

1813. Then in order to start with what you suppose to be the ordinary number of messages that will exist at that period, do you take the returns of the companies for the year 1866, as the foundation of your calculation?—It is generally admitted that there were about 6,000,000 messages in the year 1866; of course there is a growing rate of increase under ordinary circumstances on those messages.

1814. Have you ascertained what the average annual increase of the companies has been from their own experience?—It is believed to have been from 15 to 20 per cent., but I propose to take it merely at 10 per cent. per annum.

1815. Then you will have from 1866 two years and a half at an annual increase of 10 per cent. to add to your 6,000,000?—Yes, I would have to add 25 per cent. to the 6,000,000.

1816. That will bring it to 7,500,000?—Yes, I take that as the starting-point; that is the estimated amount of business that would be handed over by the companies to us on the 1st of July next year.

1817. Mr. *Goschen.*] Does that include the business done by the railways?—No, that 7,500,000 does not include the little trades of the South Western, or the North British, or the Caledonian, or other railways; I do not take that into account, because those trades are mostly carried on at shilling rates, and therefore the messages would not be affected by the Post Office plan, so far as the reduction of rates is concerned.

1818. Mr. *Sargood.*] That does not include the foreign business?—No, nor the Press news.

1819. Then we start with that as the internal business?—The inland business handed over to us by the Telegraph Companies.

1820. The first step in your calculation will be to see what proportion of this 7,500,000 is to be distributed over the various rates; what proportion do you find to be represented by the shilling rate?—I am told 55 per cent. of the inland messages (and consequently 55 per cent. of the seven and a half million messages) are carried at the shilling rate.

1821. What is the per-centage of the 1 *s.* 6 *d.* rate?—Thirty per cent.

1822. What is the per-centage of the 2 *s.* rate?—Ten per cent.

1823. What is the per-centage of the extra rates for Ireland, the 3 *s.* and 4 *s.*?—Five per cent.

1824. For 55 per cent. at the shilling rate will represent 4,125,000 messages?—Yes, it will.

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1825. As to those, you say there will be no material change effected by any change of price?—Just so: they are not touched by the reduction of rate.

1826. As to the 1 *s.* 6 *d.* messages which will be affected to the extent of 30 per cent., what will their number be?—They will be 2,250,000.

1827. The 10 per cent. represents 750,000?—Yes, and they would be liable to a still greater amount of increase through the reduction.

1828. And the 5 per cent., representing the messages that are carried at rates ranging from 3 *s.* and upwards, and which will be affected to the extent of 70 per cent. in charge by the reductions, would amount to 375,000?—Yes, those would be liable to the greatest amount of increase.

1829. That brings us up to the total of 7,500,000 with which you start?—Yes.

1830. Mr. *Goschen.*] Do you assume that the 7,500,000 will be divided in the same way as the 6,000,000?—My idea is, that the proportion will be the same. My assumption is, that the proportion in 1869 will be as much as it is now.

1831. Mr. *Sargood.*] Taking your seven and a half millions as the normal state from which you start, your first proposition is that each proportion of that under its respective rates will be liable to a certain amount of increase of quantity in consequence of the decrease of expense?—Yes; and there is another element which will tend to increase. Of course the higher the rate charged for a message, the greater under the present system is the distance over which that has to travel, and the greater the distance the greater is the desire of the public for correspondence by telegraph, because a greater advantage is gained by them than when the distance is short.

1832. Let us take your prospective increase as the consequence of the reduction of the rate; first of all, you say the 4,125,000 you do not expect to increase, because the rate will be stationary?—Just so.

1833. As to the 2,250,000 which is reduced 33 per cent. in charge, how much do you consider that will increase per cent. in quantity?—Those are messages that travel over a distance from 100 to 200 miles. In Belgium, where the greatest distance that a message can travel is 160 miles, and the minimum distance is perhaps from one to two miles, we know that a reduction of 33 per cent. in rate produces an increase of 80 per cent. in messages.

1834. A reduction of 33 per cent. in price produces an increase of 80 per cent. in quantity?—A reduction of 33 per cent. in price in Belgium, where the whole range of the messages is from one mile to 160 miles, produces an increase of 80 per cent. in messages. I am now considering what increase will be produced by the reduction of 33 per cent. in messages which have a range from 100 to 200 miles; that is a range, practically, of from 100 to 200 miles, and I do not propose to take as the increase for them any more than is gained in Belgium, where the range is so much less: I propose to put it at the same, 80 per cent.

1835. Eighty per cent. upon that will be an increase of 1,800,000, making a total of 4,050,000, of that description of messages?—Yes; it will raise the 1 *s.* 6 *d.* messages to 4,050,000 in number.

1836. Now we will take that class of messages that are subject to a reduction of 50 per cent., what do you think will be the increase in quantity as the result of that reduction?—Those messages travel over a range of from 200 to 600 miles; their maximum distance may be anything between 200 miles and 600 miles. Now in Switzerland, where the maximum distance to be traversed by a message is 200 miles, a reduction of 50 per cent. in the rate produced an increase of 90 per cent. in the number of messages. I think it is only fair to assume that a like reduction of rate for messages traversing distances ranging from 200 to 600 miles will in this country produce an increase of cent. per cent. I propose to take that for the increase in the number of 2 *s.* messages.

1837. That will bring that class of messages to 1,500,000?—Yes.

1838. Then there remains the expensive messages, the 3 *s.* and 4 *s.* messages, which will be reduced 70 per cent. in charge?—Those are the messages between Great Britain and Ireland. I propose to take the increase in them at 150 per cent.; that will raise them to 937,500 from 375,000.

1839. Those increased several quantities make in the aggregate, I think, 10,612,500 messages?—They do.

1840. And

1840. And you get up to that quantity, at this stage of the calculation, solely having regard to the reduction of price?—I do.

1841. You have already told us that a very material element in creating increased traffic arises from facilities and accommodation?—Yes, there is no doubt that wherever you give greater accommodation, wherever you bring your post office, or bank, or money-order office closer to the people, you get a larger amount of business, and wherever you keep the offices open a larger number of hours you get more business.

1842. You propose to give very great facilities, as you told us the other day, not only by increasing your number of stations, but by increasing the facilities of communicating with them by means of your intermediate pillar posts, and so on?—We propose to give an office of transmission to every 1,400 inhabited houses, and an office of deposit for messages to every 300 inhabited houses.

1843. As to the hours of business, do you increase them?—In the great majority of cases the hours of business will be longer with us than they now are. In addition to that, there is another element. As we shall carry the messages much closer to the population, the charge for porterage will be less, so that my estimate of the reduction of rate is nothing like the real reduction of rate which the public will gain. I was looking over a letter from one of our postmasters at a money-order office which will eventually become a telegraph station, and he says that no message can be sent to him or by him for less than 18 *s.*; so that really there will be a reduction not from 3 *s.* to 1 *s.*, but from 18 *s.* to 1 *s.*

1844. *Chairman.*] What place is that?—Padstow; he gets his telegram from Bodmin; we have plenty of cases like that; it costs 18*s.* now. I have plenty of other instances; of course you cannot get porterage on foot above a certain number of miles.

1845. Mr. *Sargood.*] What do you calculate will be a fair per-centage of increase to represent the consequence of increased facilities?—There would be a great reduction of porterage; I had thought of putting 20 per cent. for it, but I have only put 10 per cent. in order to be moderate.

1846. Ten per cent. would be an addition of 1,061,250?—Yes.

1847. That would bring you to a total increase representing 11,673,000 messages?—Yes; say 11,650,000 messages to start with.

1848. There we have the combined effect first of decreased price, and next of facility of communication?—Yes.

1849. Then I believe there is such a thing as something like an additional payment for an excess of 20 words?—Yes, that becomes a considerable item.

1850. Have you made a calculation as to what would be fair for that?—I put, merely from my own post-office experience, as to overweight in letters, an addition of 2 *d.* to the 1 *s.*; but I have been informed by a gentleman who worked two or three years ago at the telegraph between Liverpool and Manchester with a 6 *d.* rate, the excess there was 1¼ *d.*; that would make my 1 *s.* 1 *s.* 2½ *d.*

1851. That would be an addition of 1-6th to your 11,650,000?—Yes.

1852. That brings it out to 13,600,000?—Yes, I put it into money; and I estimate taking 11,650,000 messages at 1 *s.* 2 *d.* per message will produce a gross annual income of 680,000 *l.*

1853. Mr. *Goschen.*] You reckon on 400,000 more messages than in your first report?—I took nothing then for increased accommodation; I have stated I did not take anything for that.

1854. Mr. *Sargood.*] Having exhausted the income, the next important thing is to take the set-off to it in the shape of expenses. You took your return of the quantity of messages of the Telegraph Companies as your datum point for your income; do you take the Telegraph Companies returns of their annual expenditure as your datum point for the expenditure?—Yes, I have taken for that 330,000 *l.* per annum.

1855. You get that from the Telegraph Companies?—Yes.

1856. I believe they have told us themselves that they look to a very great reduction as the result of amalgamation of management, supposing they had it in their own hands?—They have had that in view some years, and they have always been of opinion that if they could have amalgamated they could have saved considerable expenditure by it.

1857. Have you taken that as the first point of calculation?—Yes, I have

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asked them to consider what they could save by amalgamation, and they tell me they think they could strike off from the whole amount of salaries and wages one-fifth, which would be about 30,000 *l.*; from their station expenses one-fourth, or 3,000 *l.*; from their rents one-third, or 13,500 *l.*; and that if they gave up, as we propose to give up, the collection of news, they could strike off from 7,000 *l.* to 10,000 *l.* on that account.

1858. What is the total of that deduction?—£. 55,000.

1859. That brings the expenditure down to 275,000 *l.*?—Yes; and I think in merely taking what they could save by amalgamation as the measure of what I could save by amalgamation, I am making a moderate calculation.

1860. You do yourself an injustice?—Yes, because I have got my offices. I have my staff, who must be on the spot all day, but not necessarily occupied all day; no doubt I could save more.

1861. If they could save by amalgamation, you think you could save more, but you are content to take it at what they could save?—Yes.

1862. As we have thrown over the foreign receipts in our calculation of revenue, you will not include the expense of carrying on the continental business?—I have deducted the expense of working and maintaining all the submarine cables to be about 10,000 *l.* I believe they will all allow that as a moderate estimate.

1863. That brings your expenses to 265,000 *l.*?—Yes.

1864. As you propose to extend the plan, and as there is the question of maintenance and so forth to be looked to, you will make some addition to those figures for maintenance?—Yes; we propose extensions which will probably cost 200,000 *l.* I will put in a memorandum presently, showing how that 200,000 *l.* is arrived at, and I think that is in about the proportion of 1-11th or 1-12th of the whole sum expended by the Telegraph Companies in construction. On that account I propose to add, as the cost of maintaining and working my extensions, 10 per cent.

1865. That would be 26,500 *l.*?—Yes.

1866. That would bring up your expenditure to 291,500?—It would.

1867. Then you have still another item which you find, upon the experience of other companies?—That is the estimate of the extra cost we must incur to meet increased business. It is the experience of all people who have worked a large business of this kind that the cost does not by any means increase in proportion to the increase of business; you can always do a greater amount of business at a less proportionate cost than you can do a smaller amount.

1868. In your Report, at page 140, you give the experience of the Electric Telegraph Company on the subject?—Yes; I show there that an increase of 105 per cent. in the business of that company only increased the cost of the company over a greatly extended system by 33 per cent.

1869. You are willing, increasing your business to the extent of only 55 per cent., even to take the whole amount of their increased cost, say 33 per cent.?—Yes; the estimated number of messages which we should get by the reduction of rate and increased facilities is 55 per cent. above the starting-point, and I assume it will cost us as much to do the increase of 55 per cent. in business as it cost them to meet the increase of 105 per cent. in business.

1870. Putting it strongly against yourself again?—Yes.

1871. That 33 per cent. represents 87,450 *l.*, and that brings up your expenditure to 378,950 *l.*?—It does.

1872. Call it 379,000 *l.*?—Yes.

1873. Deducting that from your income of 680,000 *l.*, you leave a profit on your inland transactions of 301,000 *l.* per annum?—I do.

1874. What do you reckon the Press work at in addition to that?—Assume that 12 newspapers will hire our special wires at 500 *l.*, which I think is a very moderate estimate, and that 50 other newspapers will come in the special newspapers, which is also a moderate estimate, it will give us about 12,000 *l.* a year, rather over.

1875. What do you reckon in addition for your continental rates?—I think the net receipts, which we shall get after satisfying all our obligations to Mr. Reuter and the Submarine Company, would be about 45,000 *l.*

1876. That brings your total net revenue to 358,000 *l.* a year?—It does.

1877. That is a result wholly dependent on your calculation of increased business,

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ness, according to the proportion you have already given us?—Yes; I should say first that it does not take into account at all the small trades that we shall have purchased, it is not quite irrespective of those, and therefore in taking into consideration the amount of capital required, the capital required for those small trades should not be taken into account. I mean the messages of the South Eastern, the Caledonian, and the North British Companies, not having put them into my number of messages, though no doubt we shall get them all hereafter; indeed they will be affected by increased facilities just as the other messages are, but not having taken them into account in my calculations, I must not account on the other side for the price we shall have to pay for them.

1878. This being the result you arrive at from your anticipated increase, I think you are going to give it as strongly as you can against yourself by showing what the result would be, supposing there were no increase at all?—I will assume that, by reducing the rates and largely extending the facilities, we shall not get more messages than we start with.

1879. Adopting the figure we have started with, and assuming no increase of business, you arrive at this, that your 7,500,000 messages at 1 *s.* 2 *d.* would amount to 437,500 *l.*?—Yes.

1880. From which you deduct what?—Then we have again to calculate the expenditure. I take the expenditure of the Telegraph Companies and deduct from it merely the sum they could save by amalgamation.

1881. That reduced it to 265,000 *l.*?—To which I add the 10 per cent. for the cost of working and maintaining the Post Office extensions; that brings the expenses to 291,500 *l.*

1882. Which being deducted from the income leaves you 146,000 *l.*?—Yes, to which we have to add press messages 12,000 *l.*, and continental messages 45,000 *l.*

1883. That brings it, without any addition to business at all, to 203,000 *l.*?—Yes, it is not necessary in this case to make any additional expenditure on account of increased business, because we have assumed that there will be no increased business.

1884. Therefore it stands thus, if your anticipations of increase are realised, your net profit will be 350,000 *l.*; but taking it at the worst and supposing no increase of business at all, your net profit would be 203,000*l.*?—£. 203,000.

1885. To imagine for a moment that the mean of the two would be fair, what does the mean come out to?—The mean of the two estimates gives a net revenue of 280,000 *l.*, my maximum gives 358,000 *l.* and my minimum 203,000 *l.*, the mean of which is 280,000 *l.*

1886. With regard to the Belgian administration, you told us that they have worked out with some care the average cost of individual messages, will you tell us what you know about that?—They make the average cost of the inland messages 90 centimes, that is about 9 *d.*, and that is a very fair guide for us, because they are doing exactly what we propose to do; they go as closely as they can to the population; they have offices of deposit and they give porterage free in many cases, and they have a low charge.

1887. Supposing you were to divide your 5,700,000 messages amongst the 291,500 *l.*, how much would your average cost per message come out at?—The average cost of an inland message would be to us as nearly as possible 9 *d.*

1888. So far, they corroborate your theory, and you corroborate their appearance?—So far; then in my maximum estimate I have considered that the cost of 11,650,000 messages would be 379,000 *l.*; as a matter of course the average cost of a message decreases with the increasing number; the average cost of an inland message, on the assumption I have just stated, would be about 8 *d.*, rather less than in the previous case; but the mean between my minimum and maximum tallies very closely with the result of Belgian experience.

1889. Taking your maximum estimate of revenue and expenditure, do you find that you differ very materially from them?—I have made several estimates; of course, what I make now does differ; but it does not differ essentially, and the discrepancies can be pretty well explained. In my Report of 1866 I took the probable number of messages at 11,200,000. In my Report of February 1868 I took it at 11,000,000. In an estimate which I made for the Chancellor of the Exchequer in June of this year, from somewhat different data, I took it at 11,125,000. I have now, from the more perfect data which I have been able to

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obtain from the Telegraph Companies, put it at 11,650,000. In none of my previous estimates did I add anything for the increase produced by extensions of accommodation and increased facilities; that was left out entirely in previous estimates, and it is included in this.

1890. Mr. *Goschen.*] Were not the continental messages left out?—They are still in that estimate; they are included in the revenue, but not in the number of messages.

1891. Mr. *Sargood*] What was your estimate of expenditure in 1866?—In July 1866 I put it at 456,000 *l.*; in February 1868, 425,000 *l.*; and in June of this year, 415,000 *l.* I have now put it as 379,000 *l.* The difference arises mostly from the fact that until now I was obliged to guess at the amount which the Telegraph Companies themselves would save by amalgamation, and also partly from the fact that I did not know what was the cost of making and maintaining submarine cables.

1892. You have given an estimate of what you think would be the probable increase of telegraphic messages under reduced rates and extended facilities, have you considered what would be the probable falling off in the number of letters passing through the Post Office, in consequence of the substitution of telegrams for letters?—No, I have often tried to consider what would be the probable increase in the number of letters passing through the Post Office, in consequence of the stimulus given to correspondence by the telegraph.

1893. What conclusion do you arrive at on that point?—Nothing breeds so fast as correspondence, letters beget letters as fast as they are delivered. I expect that the growth of telegraphy will stimulate the growth of letters in the following way;—Our experience teaches us that wherever we can shorten the course of post so as to lessen the time required for the transmission of a letter and the reply thereto, thereby making it possible for the public to write a greater number of letters and replies in a given time, we invariably get a greater number of letters in that given time.

1894. Will you give us an instance of that in your own experience?—The most remarkable instance in my own recollection took place in 1860, when by accelerating the French mails and altering the times of the dispatch for such mails, we shortened the course of post between say, Edinburgh and Paris and Manchester and Paris, to the extent of one day, giving other advantages to other towns in proportion, and the immediate effect of this shortening of the course of post, was an increase of not less than from 10 to 15 per cent. in the number of letters passing between this country and France.

1895. The correspondence between the two countries is very large, is it not?—Yes, prior to this acceleration it would be about four and a half million letters, and in two years after the acceleration it had risen to nearly six and a half million. Then the interpolation of a day mail between two night mails, also increases the facility for writing letters within a given time, and usually brings in a greater number of letters within a given time. I gave the other day some illustrations of the way in which the course of post may under our scheme be shortened by the use of a partly postal and partly telegraphic system; but it is obvious without any illustration at all that extensions of telegraphic accommodation increase the power of communication, partly by post and partly by telegraph within a given time, and it is matter of experience with us, that by increasing the power of communicating within a given time we always get an increased number of communications in such time.

1896. Have you made any estimate at all as to the extent to which the growth of telegraphy will stimulate correspondence?—No, I could not make any estimate; but I can say this, that if the stimulus which the telegraph would give to letters increased our present number of letters by only ½ per cent., we should get an addition of 8,000 *l.* per annum to the net post office revenue.

1897. You have given us already your maximum and minimum calculation of the probable amount of messages, starting with a datum point of 7,500,000?—Yes, I arrive at that by adding an allowance for the annual growth, from the end of 1866 to the middle of 1869.

1898. But you have not taken into calculation any probable annual growth in addition to that?—No, I have not allowed anything for that; I have assumed what is a most absurd assumption, that when we had got to 11,000,000 of telegrams we should stick there.

1899. You believe, having arrived at that amount as the joint result of increased

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increased facilities, and decreased price, that the ordinary annual growth in quantity would still be going on from natural causes?—There is an ordinary growth now, people spend more in telegraphic messages every year. The increase of population, the increase of wealth, and the spirit of education always maintain an annual growth of this kind, either in letters or telegrams. In fact, I have made an almost preposterous assumption. In the maximum estimate which I have given to the Committee, I have only taken into account the increase likely to be produced, at once, by the reduction of the rate, and the extension of accommodation, and have allowed nothing afterwards for increase. In my minimum estimate I have assumed, not only, that the Post Office will get no increase under the change of system, but it will so paralyse telegraphic correspondence in this country as to check even the ordinary growth which is going on now throughout the country.

1900. You have rather made your calculations with a view to show the positive certainty of this experiment being a safe one, I suppose?—Yes, I wanted the maximum estimate to be a moderate estimate; I think the minimum estimate is an impossible one. My object has been to convince the Committee that they may with almost entire certainty rely upon a net revenue within a range of from 200,000 *l.* to 360,000 *l.*, the mean of which is 280,000 *l.*

1901. With that 280,000 *l.* as income, that would represent a pretty large capital, if you should need it, for any purchases you would require. Have you gone into the question at all as to the capital that would be required?—I have from time to time made estimates of the capital required for the purchase of the interests which we shall have to buy; but I have no estimate to give now necessarily.

1902. They are becoming rather delicate subjects now that it is reduced to a question of arbitration?—It would be impossible now to give any estimate of the amount of capital required.

1903. It would not be fair to either side to enter into the subject with the agreements before us?—No; I leave it to the other side to take care of themselves: it would not be fair for the Postmaster General to give any estimate.

1904. That income that we have now touched upon as the minimum income which could possibly arise from the telegraphs, represents a large amount of capital, much more than you can ever want?—It represents a larger or smaller amount of capital according to the terms on which you raise it; that is, according to whether you wish to wipe your capital out in a given number of years or leave it as a permanent charge. I should like to say one word with reference to the discrepancies that are sure to be discovered some day or other between the different estimates which I have made of the capital and the amount which will probably have to be paid; and it is this, that if hereafter we have to give more than I have at any time supposed we should have to give, it is really because in giving a greater sum we are going to get a greater sum for it than I have ever supposed it possible we could get. We are going to buy a greater trade than I thought there was in the country. That will be the main reason of any difference between past estimates and future experience.

1905. In fact, if the concern is what the gentlemen who at present own the property call it, namely, a good and profitable undertaking, the more you have to pay the better, because it will represent that you are getting more than you expected to get?—Within certain limits, I would agree to that but not precisely as you put it.

1906. I put it rather more strongly than you would put it; however you are looking to the purchase of that which is profitable and not that which is a loss?—Yes.

1907. It may be put in that way?—Undoubtedly.

1908. Therefore whatever you have to pay, subject to the question of arbitration, must be assumed to be at any rate a proper *quid pro quo*?—Undoubtedly.

1909. There has been a good deal said about remunerative and unremunerative districts, I suppose those are things which exist in the postal system as in every man's business, in truth?—Yes, we are constantly from day to day extending the postal service into unremunerative districts; we constantly extend free deliveries along lines, the produce of which is already swallowed up by the expenses, but the result of such extension sooner or later is invariably this; that a district which is unremunerative to-day becomes remunerative after it has had time to appreciate the full postal facilities afforded to it, and we are constantly,

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so to speak, wiping out unremunerative districts, although at present and for some time to come, unremunerative districts may come in upon us and ask for additional accommodation.

1910. Have you any means that you adopt for ascertaining whether districts which are unremunerative at starting have afterwards become remunerative?—Yes, we are constantly asked to extend the free delivery along a line joining from "A" to "B," and we inquire what number of letters pass along that line beyond the free delivery; we feel certain that the number of letters which will be brought into the free delivery will barely suffice, even if they do suffice, to meet the additional expense, but on some grounds or other we grant the additional accommodation; at some later period we are asked to extend the free delivery on the same line from "B" to "C," and when this demand is made, upon us we consider the earnings of the whole post from "A" to "C," and we find that the correspondence on the line between "A" and "B," which, when we last considered it, would not meet, or would hardly meet the expense of the service, is so grown as to yield a moderate profit.

1911. I suppose you have, in your experience, found sometimes that the correspondence on what you call the line between "A" and "B" has not grown at all?—We do find that, and then it goes rather badly with the people on the line between "B" and "C."

1912. What do you do then?—We do not give increased facilities quite so readily on that line, but as a general rule unremunerative districts disappear from year to year and become self-supporting, and it is quite possible in time that every part of the United Kingdom will become self-supporting.

1913. What is your most pointed illustration of unremunerative business?—We lose on every letter passing between England and Ireland; when I say that we lose at this moment I speak with a certain amount of reserve; I know that we did lose considerably on each of those letters two or three years ago, and I have no reason to suppose that circumstances have materially altered since; but I have not made any very recent calculation as to the loss, but you may take it as quite certain that there is a loss upon every letter between England and Ireland.

1914. It never occurred to you to cut off the communication between England and Ireland on that account, or to raise their penny to any other sum?—I have considered whether there would be any way of meeting the loss; but I do not see anything for it but to regard it simply as a part of the absolute necessary cost of keeping up rapid and secure communication between this country and Ireland.

1915. It is a part of the whole, in fact?—Yes. I am quite certain that a reduction in the amount of accommodation would not be likely to meet the difficulty. If the means of communication between the two countries were made less costly, it could be by making them less rapid, and, independently of the dissatisfaction that would be felt at the retardation of passenger traffic, making the communication less rapid would so delay the course of post between the great cities of England and Dublin, Belfast and Cork, as materially to reduce the correspondence, so that the loss, in all likelihood, would be much greater after the reduction of accommodation than before.

1916. In fact, as you say, the reduced scale of price increases the quantity; you would not imagine that you would get over the difficulty by increasing the price?—If you increased the postage on a letter to Ireland to 2*d.*, you would get very much less than half of the letters that now go; as a matter of course, that would not meet the difficulty; and I do not know that that loss, although it involves a diminution of the general revenue of the Post Office, is a matter of very serious consideration.

1917. In point of fact, it is not (so far as the principle involved is concerned) the mere question between the writer and the reader of the letter that has to be considered?—You cannot suppose that only the writer and the receiver of Irish correspondence are the people who are interested in it, but the whole country is necessarily interested in such correspondence; a large part of the trade of the country depends upon it, and an immense number of people who never either receive a letter from or send a letter to Ireland, would be materially crippled in their resources if communication with Ireland were cut off.

1918. The same may be said of telegrams to distant parts, it is not merely the sender and the sendee who are interested in the matter?—No.

1919. A number

1919. A number of persons are involved in the subject matter of the telegram?—I think you may say that the whole community generally is interested in the correspondence of the country, that a mere beggar in the streets, who does not write a letter in a year, would be a more wretched beggar than he is if the correspondence of the country were cut off.

1920. I suppose it is very probable that the Isle of Man correspondence, and the correspondence of the islands on the Scotch coast are not very profitable to you?—There is a loss on all those letters, as a matter of course.

1921. Do you think with the telegraphs, as with the Post Office, a principle upon which you should go should be, that while as a whole the concern is self-supporting, there should be every effort to give the greatest accommodation at the lowest possible charge?—I do.

1922. Do you believe that anybody could conduct the telegraphic communication of the country with greater, or so great facility, as the Post Office now can do it, if the matter is entrusted to their care?—No one can have such facilities for such a work as the Post Office possess; it hardly requires any demonstration. I have a memorandum to put in which, if the Committee will allow me, I will read, for the purpose of getting it on the notes; it is a calculation showing how we arrive at the 200,000 *l.* required for the extensions of the postal telegraphic system from the black dots on the map to the red dots. This memorandum is not drawn up by myself, but by a gentleman in the Post Office, who had six years' experience in the office of a Telegraph Company, and who has paid a very great deal of attention to the subject, and who will be prepared to answer any questions the Committee may put to him at any time they like; in fact, he is the gentleman who originally proposed to Lord Stanley of Alderley that this scheme should be introduced, when Lord Stanley was at the Board of Trade. He says, "I submit for your information a memorandum of the probable cost of transferring the wires and apparatus of the telegraphs from buildings now in the occupation of the Telegraphic Companies to our post offices, of making certain additions and extensions, and generally of mounting the system under the Post Office management. This is comparatively a very small matter, still it is possible that the Select Committee now sitting on the Electric Telegraph Bill may wish to have information concerning it. I will take, first, the figures relating to England and Wales. Referring to the maps which are exhibited on the walls of the Committee-room, I may remind you that on the occasion of your first examination, you stated that there are 2,056 money-order towns and villages in England and Wales; that, first, 648 of those have perfect telegraphic accommodation; that, secondly, 567 have imperfect; and that, thirdly, 841 have no telegraphic communication at all. To the 841 places of the third class we shall, of course, have to put up new wires; and, in the case of the 567 places of the second class, we shall have to extend the wires from the railway station whereat the telegraph is in each case established to the nearest money-order office; in fact, so far as new work is concerned, these two clauses may be taken as one clause. Telegraphic wires, as you are aware, run along nearly every railway in the kingdom, and all that we shall have to do, in either case, is to erect a new wire from the railway to the town or village which we desire to serve with a telegraph. You further stated in evidence, in answer to Question 94, that the average distance of a railway station from the nearest money-order office is about three-quarters of a mile. This figure was arrived at after very careful inquiry, and I think that there is no reason to doubt its accuracy. Classes 2 and 3 together, then, number 1408, and an average distance of three-quarters of a mile multiplied 1408 times is equal to an aggregate distance of 1056 miles. Now the engineer in chief of the Electric and International Telegraph Company told the Committee in effect that the cost of a telegraph of two wires to Wick would be about 30 *l.* a mile (*see* Question 960 and Question 969). This estimate fully bears out calculations which we had previously made at this office. At 30 *l.* a mile (and it must be remembered that is the cost of two wires, whereas in many instances one wire would be all that we should require) 1,056 miles of new work would cost 31,680 *l.* Total for extensions, say 32,000 *l.* We have next to consider the cost of transferring telegraphic apparatus in towns and villages and of providing sundry fittings and leading the wires into the provincial post offices. No pains have been spared in obtaining full and reliable information on the subject, and I believe that the following estimate

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makes liberal provision for, even if it is not somewhat in excess of the actual amount likely to be required under this head:

Estimated Cost of Transfers, &c.

	£	£
At 10 large towns per office - - -	500	- 5,000
„ 30 smaller towns do. - - -	100	- 3,000
„ 100 other towns do. - - -	50	- 5,000
„ 1,916 places, being the remaining number of money-order towns and villages, do. - - - -	30	- 57,480
		£70,480

Say for transference, &c, 71,000 *l.* Then comes the question of the cost of the proposed district systems in large towns. I annex a memorandum, prepared, as it seems to me, with great care and ability, by Mr. F. E. Evans, engineer of the Universal Private Telegraph Company for its Manchester, Liverpool, and Leeds district. The first part of this paper relates to ordinary telegraphic wires, and corroborates what has been already stated as to their cost. The latter part takes up the question of local or over-house telegraphs, and I would call attention to the following paragraph: "Thus for a town say with six stations, each running in different directions from the centre office and including a mileage of seven miles, the cost of placing the whole in direct communication with the local office would be about 91 *l.*" Of course, in large towns like Manchester, Liverpool, and so on, we should want a somewhat larger system than Mr. Evans has in his mind, and to be well within the mark, I think we had better assume it would be fully five times larger in all cases; so that it would cost in round numbers 500 *l.* per town, on the average. Ten large towns, not including London, at that rate would cost 5,000 *l.*, which sum would seem ample to suffice for the construction of district systems. On the London system the Government would probably be prepared to spend a good round sum; and while competent judges assure us that a consolidation and re-arrangement of the four systems now in operation in London, coupled with an expenditure of about 10,000 *l.*, will give all that is necessary, I would propose to make a more liberal allowance and spend on London and its suburbs at least 20,000 *l.* Lastly, we have the contingency of new wires being required (I now refer to wires alone as distinguished from pole work) to connect up various points of the present independent system, so as to render the whole harmonious and also to make provision for swiftly conducting new business where existing wires are no more than sufficient for existing business. Upon this point no certain information can at present be obtained. It could only be obtained after a protracted examination of existing lines, and after elaborate calculations of the direction in which telegraphic business will most rapidly extend itself. But I feel satisfied that while a less sum will in all probability suffice, an allowance of 20,000 *l.* for this and other contingencies will be ample. For our new offices we shall, of course, want instruments; but it will be obvious that by a consolidation of the existing systems a certain amount of duplicate and even triplicate stock will be at our disposal. So that bearing that fact in mind, and looking at the liberal provision made for the expenses under the head of transference and under other heads, I do not think we absolutely require any grant of money for this purpose. However, as all contingencies cannot be foreseen, it may perhaps be as well that we should have a margin for expenses under this head, and I would suggest that 2,000 *l.* be asked for accordingly. The items of expense for England and Wales will then stand as follows: For extensions, 32,000 *l.*; for transference, 71,000 *l.*; for district system in large towns, 5,000 *l.*; for improvement and extensions in London district, 20,000 *l.*; for extra wires and contingencies, 20,000 *l.*, and for instruments, 2,000 *l.*; making a total of 150,000 *l.* As regards the probable expenditure in Scotland and Ireland a very few details will probably be sufficient. The money-order towns in Classes 2 and 3 in both countries are less than one-half the number in England and Wales; they are 680 as against 1,408. Some items of expense, such as the 20,000 *l.* for the London district, will be wholly saved; and other items, transference, for instance, will be largely decreased, both because the number of places at which money will be spent will be fewer, and because

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because the work to be done will be less costly in its nature. Altogether, I feel satisfied that 50,000 *l.*, or one-third of the estimated expenditure for England will cover all the expenditure necessary in Scotland and Ireland. The sum required for mounting the Post Office scheme will therefore be 200,000 *l.* This is twofold the amount which it was estimated we should require two years ago, and I am by no means sure that the latter estimate is not too liberal; but I understand your feeling to be, that in mounting a scheme of the magnitude of that to which the Electric Telegraphs Bill is to give effect, it would be highly inexpedient to run the risk of impairing its efficiency and completeness by considering too closely the question whether the comparatively small sum of 200,000 *l.* is or is not more than sufficient for the purpose. I may however point out that when we framed our former estimate of 100,000 *l.*, it was not in contemplation to do so much as we now propose to do with our 200,000 *l.*; and, perhaps, it would be as well to call attention to the fact that inasmuch as 200,000 *l.* is about a one-eleventh or one-twelfth part of the total sum actually expended by the four telegraph companies in constructing their lines, we are well within the mark in adding 10 per cent. to the estimated present cost of maintenance in consideration of our proposed extensions of the system." Here follows a memorandum from an officer of the Telegraph Companies which will be useful to the Committee, as it gives them his experience of the cost of working and maintaining telegraphs. He says, "If the authorities undertook the construction of their own lines, the following is the estimated cost per line of the work specified:—For a line of from one to six wires, 20 *l.* per mile for first wire; for line from six to 12 wires, 22 *l.* per mile for first wire; for line from 12 to 20 wires, 24 *l.* 10 *s.* per mile for first wire, and in each case 6 *l.* per mile for every additional wire. The above is for ordinary work as was carried out by all the companies; anything special being required, such as wire of a large gauge, &c., would of necessity increase the expense. I may mention that the usual contractors' charges range from 30 *l.* per mile upwards for the erection of the first wire, and from 9 *l.* to 10 *l.* per mile for the additional wire. A single wire may be run over-house, that is, from chimney to chimney, for 10 *l.* per mile. A line of over-house work consisting of iron poles, and to carry from one to eight open wires, would cost about 45 *l.* per mile for the first wire, according to the nature of the work and the difficulties to be overcome, and 8 *l.* per mile for each additional wire. A line of over-house (iron poles) for a cable would cost about 48 *l.* per mile, and if a seven wire cable was suspended, the average cost per mile for each wire would be 19 *l.* 18 *s.* 6 *d.*, for a 15 wire cable 13 *l.* 9 *s.* 4 *d.*, and for a 20 wire cable 11 *l.* 12 *s.* The cost per mile (first wire) for an over-house line of wood poles capable of carrying from one to eight wires would be about 38 *l.*, and 8 *l.* per mile for each additional wire. It would be a perfectly safe calculation to take the average cost of running branch wires between the chief post office in any town and the district offices at 13 *l.* per mile, which sum would include the leading in of the wires at the different stations, connecting instruments, &c., and opening the line. If the system required to be opened in any town be calculated at the rate named, it will be as near correct as can possibly be found without actual survey. Thus, for a town say with six stations, each running in different directions from the centre office and including a mileage of seven miles, the cost of placing the whole in direct communication with the head office would be about 91 *l.* Should a case arise where very little work was expected to be done between two and three branch stations and the chief office, and where Professor Wheatstone's alphabetical instruments would be used it would not probably, in the first instance, be necessary to have a separate instrument at the head office for each station; as, by means of a switch, either of the three would be put in communication with the apparatus. As the system developed itself and business increased, instruments could be added to those lines requiring greater attention. The switch arrangement alluded to is in operation at most of the large towns in England and is very serviceable in the police, and fire telegraphs where one instrument will work to four, or six, or more stations. The average cost of maintenance of over-house work may be reckoned at about 30 *s.* per mile per annum. This includes stores such as wire, &c., and workmen's wages only. The usual charge for permission to erect poles and wires along the turnpike road is 1 *l.* per mile per annum, and with few exceptions permission to erect poles and attach fixtures to houses and chimneys, is granted upon payment of a nominal rental of 1 *s.* per annum. The people gene-

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rally, are of opinion that the wires are for the public good, and as a rule, no impediment is thrown in the way of work being carried out."

1922.* *Chairman.*] You alluded to some statement which you were going to put in?—Yes; I will hand in the following Tables. (*Vide* Appendix).

Cross-examined by Mr. *Vernon Harcourt.*

1923. On the 6th of July, I see my learned friend, Mr. Rodwell, put it to you, that the whole question of the Submarine Company, and Mr. Reuter's Company, and the other companies, were always connected together, so that they must be all settled together. Mr. Rodwell says, "They are all connected with one another, are they not?" and then you say, "No, they are rather conflicting one with the other." Then Mr. Rodwell says, "I mean they all want consideration together?" and you say "Yes;" and then Mr. Rodwell, not to be defeated, says, 'The consideration of them is connected?" and you reply, "Yes." Have you considered those questions as bearing one upon another?—I have.

1924. That is to say, as you admitted very candidly the other day, you, representing both the inland companies, could not fulfil the obligations with reference to the submarine companies, which, as you say, are conflicting?—I did not say that it was impossible. I certainly admitted that it would be difficult.

1925. We will take it, then, to be difficult to fulfil the conflicting obligations; you will go as far as that?—That is to say, that in our present state of conflicting obligations, one might obstruct the other.

1926. For the Post Office it is not impossible, but only difficult to carry out conflicting obligations. I should like to know exactly your scheme of getting over the difficulty of carrying out conflicting obligations?—The desire of the Postmaster General is to do this: when he has purchased the property of the Electric and International Company, and has thereby derived the obligation to Mr. Reuter, to acquit himself of his obligation to Mr. Reuter on terms that shall be satisfactory to that gentleman, and then to do with the whole of the cables so acquired between Lowestoft and Hanover, and Lowestoft and the Continent, what shall seem best to him.

1927. There is an old phrase about a certain kind of thing that deals in generalities. I should like something more specific. Do you propose to buy Mr. Reuter's cable, or do you not?—We have under consideration a proposal for buying Mr. Reuter's cable, and his concession and his property in it.

1928. As you say the two things are connected, have you made any arrangements or come to any understanding with the Submarine Company?—We have considered an understanding with them.

1929. Have you made an arrangement with the Submarine Company?—We have not actually signed the arrangement, but heads of agreement are drawn up and are substantially agreed to.

1930. Now, will you tell me what they are?—I have no objection to put them in; I have not got a copy here.

1931. Do you mean that the Post Office have not kept a copy of the heads of agreement which are substantially come to?—I have not got a copy.

1932. I should have thought that, dealing with millions of money, a memorandum would be kept by the Post Office?—I have no doubt there is a memorandum kept at the Post Office, but I did not expect to be called upon for it, and I have not brought it.

1933. Then I think I must ask for an adjournment of the Committee until I can see it. I want to know if you can tell me sufficiently accurately from your memory what the terms are?—I will not undertake to speak from memory. If I had the agreement in the room you should have it, but I have not got it; if our solicitor has it, he will give it you. At all events, I will undertake to produce it to-morrow morning.

The *Chairman* stated that when the agreement was produced, Mr. Vernon Harcourt should have an opportunity of cross-examining upon it.

Mr. *Vernon Harcourt* was heard to state that he required to know whether they have given to our rivals the terms which they have declined to us.

1934. (*To the Witness.*) What you have substantially offered to us is 10 years purchase,

purchase, is it not, of our undertaking?—I can, I think, produce a copy of our letter to you as I have it here.

1935. You say, "For your property and rights of all kinds in the Norderney cable, in respect of it, and of your concession from Prussia, and your agreement with the Electric and International Company, a sum equal to 10 years' purchase of your present net profits, plus whatever an arbitrator shall award for your prospective increase in profit during the period of your agreement with the Electric and International Telegraph Company." Let me ask you on what grounds, when you have given to the other Telegraph Companies 20 years' purchase, do you offer us 10 years' purchase?—Upon the ground that I did not imagine that there was more than 10 years' right in the property.

1936. That was your ground was it?—Yes, that was my ground.

1937. Let me call your attention to the evidence which you gave on the 2nd of July, when Mr. Hope Scott asked you, with reference to the agreements of the inland companies to whom you had given 20 years' purchase. He asked you, at Question No. 232, "Were you aware that they" (that is the agreement), "would expire at very short periods?" and you said, "I had reason to believe that the London and North-Western agreement would expire in seven or eight years." Then Mr. Hope Scott asked you, "Nevertheless you make your offer to the companies of 20 years' purchase upon the basis of present net profits?" and you answered "Yes." Therefore you thought it right and proper to give 20 years' purchase for an agreement which had only eight years to run, and now you tell me that your reason for offering me 10 years' purchase is because we have only got 10 years to run; is that how you reconcile those things as a financial politician?—I did not say that; I did not say that it was because you had only got 10 years to run. You have read the latter part of my letter; if you will have the kindness to read the first part of it, in fact the whole letter from which you have read a quotation, possibly my real meaning will be ascertained.

1938. "In reply to the letters of 6th July, which have been respectively addressed to myself and Mr. Ashurst, by you and by Mr. Bompas, I have the honour to inform you that, regard being had on the one hand to the duration of your concession," that you thought was 10 years?—No, that was in Mr. Reuter's favour. On the one hand is the duration of the concession which I talked of, 30 years, which is a point in his favour.

1939. "And on the other to the terms of your agreements with the Electric, and International, and Indo-European Companies." How long do you suppose those to be?—Ten years.

1940. "And to the precarious character of submarine property I am instructed to offer to you the following terms of purchase." It is the great precariousness of submarine property, is it?—It makes a considerable difference, in my view, of the value of the property.

1941. What is precariousness of the submarine property? what does it consist in?—It was admitted that the cable had a life of about 15 years, and this cable, I am instructed, is two years old, so that, probably, it has only got 13 years to run.

1942. That is what you based your calculation upon, that 10,000*l.* a year would cover the whole working expenses of all the submarine lines?—That is not the cost of making them again at all, that is merely the working and maintenance.

1943. That is valuable as throwing light upon your financial operations; then when you say it is for working expenses it does not include maintenance and repair?—No; it did not include the maintenance of Reuter's cable, which, I believe, is done by himself.

1944. Is your financial calculation of the working expenses made inclusive of the maintenance and repair?—No, I did not say that.

1945. Does it include it?—It does not include the maintenance of Mr. Reuter's cable, because I believe he maintains it himself, and no obligation to maintain it would devolve upon us.

1946. Does your 10,000*l.* a year include the maintenance and repair of submarine cables generally?—Yes.

1947. How many?—I think that there are two to Holland and three to France.

1948. Do you mean to tell me that you come here and do not know how many cables there are between England and the Continent?—I believe that there are

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two to Holland, one long cable to Hanover, and there are three to France, I think.

1949. That is your belief only of the present state of things, that is all you know about it?—That is my impression, speaking from recollection.

1950. How many cables would you say there are between England and the Continent?—That was certainly my impression; I am not speaking of wires, but of cables.

1951. If you can give it to me within a dozen I should be very glad?—I do not think that there are a dozen cables between here and the Continent; I think that you are speaking of wires.

1952. No, I am not speaking of wires; just tell me, in your opinion, how many cables are there from England to the Continent?—I believe six.

1953. Does your sum of 10,000 *l.* include, in your opinion, the maintenance and repair of those six cables, and, if not, of how many of them?—No, merely of those cables that would devolve upon us by acquiring the property of the Electric Telegraph Company; that is two.

1954. Those are the cables to Holland?—Yes.

1955. With reference to the submarine cables, you do not propose to take them, do you?—As at present advised we do not.

1956. You do not propose to purchase them at all?—No.

1957. And you propose to leave them, then, in the hands of the Submarine Company altogether?—Certainly.

1958. Therefore your sum of 10,000 *l.* includes only the repair of the two wires now belonging to the Electric Telegraph Company?—Yes.

1959. And you are going to lease them to the submarine people?—That is within the proposition which we have been presenting.

1960. Have you agreed upon that?—I think that the company cannot doubt that we shall carry out that proposition.

1961. Have you agreed upon it?—As far as is in my power to do, we have.

1962. Have both parties agreed?—Yes, distinctly; you know that perfectly well, as I have admitted it over and over again.

1963. I want, if I can, to get you to state the fact; you are going to lease those wires to the Submarine Company?—Yes.

1964. Then the Submarine Company will have possession of all the wires except Reuter's?—Nay; if we purchase Mr. Reuter's from him we shall lease that, too.

1965. Then, if you do purchase Mr. Reuter's cable the Submarine Company will have possession of all the wires?—With us.

1966. Shall you then be under an obligation to send all the messages by the Submarine Company?—No, I do not think we shall.

1967. Who is going to take that obligation?—If we do, we shall have to compensate Mr. Reuter for his rights under the agreement with the Electric Telegraph Company; there is no question about that.

1968. Shall you be under an obligation when you take those wires, the Submarine Company remaining independent to send all messages by that company?—If we strictly construed the agreement, I do not think we should.

1969. What is the agreement that has been come to between you and the Submarine Company with reference to that?—What we intend to do, if we can carry it out, is this: to buy the Electric Telegraph Company's cables, to purchase Mr. Reuter's cable from him, and then to lease the whole to the Submarine Company, and let them work the whole system.

1970. So I understand; but assume that you have no power whatever to take Mr. Reuter's cable except by his consent?—There is no question of that; we have now a proposal from him in opposition to a proposal which we made to him, offering to sell his cable on certain terms. In fact, as I understand, it is merely a question of terms between us and him.

1971. No doubt; that I perfectly understand also; but let me ask you this: did not Mr. Reuter originally propose to you that you should give him the same terms which you gave to the other companies and to the Railway Companies, that is to say, 20 years' purchase?—I will give you Mr. Reuter's original proposal; I think I have it here.

1972. That is the proposal of the 2nd of July, is it?—No, it is not here; I thought

thought I had it; if you have a copy of it I will tell you whether it is so or not.

1973. I want to know whether the first proposal on the part of Mr. Reuter was not this: that you should purchase his cable upon the same terms offered to the other companies; that is, upon the basis of 20 years' purchase of the profits?—He did make that proposal.

1974. Did you at that time tell him, without objecting to the basis of that proposal, that it would be more convenient to the Government to pay an annuity, because they did not like to be called upon for capital?—I certainly did tell him that we would rather pay him a rent; I am not aware that I used the term annuity; if I did so I used it in the sense of rent; that we would rather pay him a rent than have to find him an additional sum of capital.

1975. At that period, did you say anything whatever on the subject of a shorter basis of purchase than 20 years?—I do not think I said anything as to a lower or a higher basis, or that I expressed any opinion upon that; I asked him to make his proposition.

1976. To make it upon the proposition of an annual rent, instead of a capital value?—Yes.

1977. Thereupon (and I have got the heads of his proposition to you) that you should purchase the cable with the Hanoverian and Prussian concessions for a perpetual annuity equal to the income guaranteed to the Telegraphic Company under the before-mentioned concessions?—Yes, a perpetual annuity.

1978. The perpetual annuity, of course, being equivalent to what we may call capital value?—Yes.

1979. I suppose that 20 years' purchase has been taken as the value of undertakings of this kind, the full capitalised value, is it not?—I really do not know; I have not considered it in that way at all. We have offered 20 years' purchase as what we consider the value.

1980. I suppose that that is not too much, or you would not have offered it?—We did not consider 20 years' purchase of the present profits to be equivalent to a pepetual grant of the present profits.

1981. Do you think it is less, do you think that 20 years' capital value of property of this character is less than the grant of a perpetual annuity?—I am inclined to think so.

1982. What would you take then to be an annuity representing 20 years' purchase?—That really requires calculation; I cannot do it offhand.

1983. Do you mean to tell me that 20 years' value of property of this kind is not regarded as an equivalent to a perpetuity in the purchase?—I am not aware that it is.

1984. Surely you must know something about these things; in purchasing trades of this kind if you give 20 years' value for a trade, do you not give what is equivalent to giving 20 years' purchase for land?—If you wish it I will admit it to you; I would say that I do not consider that a property, part of which has 10 years to run, and another part undoubtedly having 30 years to run, and the whole being subject to great risks, was worth a perpetual annuity equal to the present profits. That was the view I took; I may have been wrong, but that is the view I took.

1985. But did you consider that in the case of the inland railways, the term over such a system as the London and North Western Railway of seven or eight years was worth 20 years' purchase?—There was not the extreme element of risk in that case; and I have no reason whatever to suppose but what it would be perfectly possible to make a satisfactory arrangement with the railways; and all that I have seen has convinced me that it is possible, and before that time arrives, whatever the time may be, I have no reason to suppose that we shall be on a worse footing with the railways than with the Telegraph Companies.

1986. What in the world has that to do with the case of giving a lessee 20 years' purchase for his term; the fact is, that you may hope and expect to arrange with the landlord, on the expiration of the term, but you are giving for the term of eight years 20 years' purchase?—Yes, I do grant that, but at the expiration of those years I should still stand in the shoes of the tenant whom I have ousted.

1987. Paying nothing for renewal?—No, there would not be that payment.

1988. Still the financial basis upon which you proceeded with regard to the

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purchase of the inland Telegraph Companies was 20 years' purchase for the eight years' lease, is that so?—Supposing that we had purchased an eight years' lease, no doubt it was.

1989. What do you mean by saying "Supposing," have you not said here that you knew that the term that they had was between seven and eight years, and if so, why did you say "Supposing," is it the fact?—Because a large part of the property concerned in those leases, although the leases come to an end, still remains the property of the Telegraph Companies.

1990. Do you mean to tell me that on the London and North Western Railway, at the expiration of those terms, the Telegraph Company have any interest or value in those lines?—I mean to say that they would have, if the Railway Company desired it to remove their property.

1991. That, I suppose, is the case of most tenants who have a lease of seven or eight years; and I ask you, upon what basis have you given 20 years' purchase for an eight years' lease?—Upon the conviction that we could get as good terms from the Railway Companies as they could.

1992. Are you going to pay them anything at the expiration of that time for putting up poles and wires along the North Western Railway?—That is what we are going to arbitration about.

1993. Will you tell me, when the terms altogether have expired, what right whatever, after the expiration of eight years, the Post Office will have, without payment, to put up a single post, or a single wire, along the whole system of the North Western Railway?—It is a question between the North Western Company and us; under present circumstances, we shall not have to do so, but we should have to go to the London and North Western Railway Company when the time came, and make terms with them.

1994. Then, at the time that you made this bargain with the Electric Telegraph Company, you were buying simply rights which were absolutely to expire in eight years, and you gave 20 years' purchase of the then profits upon those wires?—The present profits.

1995. That you consider is a bad bargain, and I dare say you are right?—I did not say that it was a bad bargain.

1996. I want to know if it is worth your while to give 20 years' purchase for an eight years' lease, why you say that you cannot give more than 10 years' purchase for a 30 years' concession?—I have told you the additional element of the precarious character of submarine property.

1997. Do you remember the snow storm in England which two or three years ago destroyed all the telegraphs in England?—Yes.

1998. I want to know whether that is not at least as precarious as anything that has happened to the submarine cable; I am not talking about the Atlantic cable, but the submarine cable between England and France, or England and Holland?—The cost of a new cable did not fall upon the Telegraph Companies.

1999. What did it cost?—I believe that the Electric Telegraph Company charged 10,000 *l.* for it.

2000. For that single snowstorm?—Yes.

2001. That is not precarious property I understand you to say?—It is precarious to that extent, but the risk is much less than the submarine cable: I presume that if the cable parted it could not be recovered again, 10,000 *l.* would not replace it.

2002. I understand that you have come to no estimate of these matters with the Submarine Company because you do not mean to buy them, what are you going to give them?—We are to have a certain proportion of the receipts and to be at the expense of the land line as a matter of course, and they are to be at the expense of the cables, we recouping them a certain proportion of that expense.

2003. You said that submarine property is precarious, is not the submarine telegraph also in profit by far the most valuable in point of receipts?—That is not a question which I am able to answer.

2004. That you have not considered?—Mr. Reuter has told me that it is very valuable, and I am quite prepared to take his loose statements, but I have no knowledge upon the subject myself.

2005. Are you not aware that Reuter's cable, the ordinary cable under a concession from the Prussian Government, has a very advantageous tariff compared

pared with the other continental lines?—That also he has informed me, but what the exact effect of it is I am not prepared to say.

2006. And that being a perpetual concession?—A perpetual concession in one sense, but a concession of 30 years in another; I understand that it is an exclusive concession for 30 years, and a concession with liability to competition after that time.

2007. Mr. Reuter, at all events, has absolutely the right of laying a cable to England, and an exclusive right for 30 years?—So I believe.

2008. From the Prussian, or what used to be the Hanoverian Government?—Yes, so I believe.

2009. And the new line to India will be in communication with that wire?—So I judge by the agreement between Mr. Reuter and the Electric Company and Messrs. Seimens.

2010. That will be the best route, will it not, for telegraphic communication with India?—That I am unable to say, I will take it from you that it is so.

2011. Take it from Sir Stafford Northcote, that will be better, will it not?—I am quite content to take it from you.

2012. That being so, assuming you and your submarine friends to have the other submarine wires, what situation should we be in if we were not sold to you?—Undoubtedly we must indemnify you; there is no question of that.

2013. That is to say, of course you would not be in a position to carry on messages in the same way as the Electric Telegraph Company is now?—I am not quite sure of that; but admitting that we could not, there is no doubt we should be compelled to indemnify you, and of course we should do that.

2014. In point of fact, what you contemplate, no doubt, is purchasing our cable and handing it over with the Electric Telegraph Cables to the Submarine Companies?—Yes; and for that purpose we are extremely anxious to come to terms with Mr. Reuter, if we can arrange them satisfactorily.

2015. But you probably are not surprised that Mr. Reuter does not exactly share your views in the notion that he is to receive for his 30 years' concession one-half of what you have given to other people for an eight years' lease?—If I had ever been disposed to be surprised at people wanting to get as much as they possibly could, the surprise would have been altogether taken out of me within the last fortnight.

2016. Then Mr. Scudamore has ceased to believe in human virtue; but having paid them 20 years for their leases, you must not be surprised that other people should wish to be treated on an equal footing?—I am not at all surprised.

2017. We do not want to be unreasonable with you, if you will only deal with us upon the same footing as you have dealt with other people; what have you to say against that?—I say I will do my best to meet you there; but really it is very difficult to negociate in the face of a Committee. I never yet carried on a commercial transaction with gentlemen of the Parliamentary Bar before.

2018. But you see that we have postponed it from day to day, and it was only in despair that we might never see the heads of agreement that I negociate before the Committee?—As I said, I will do my best to meet you.

2019. Mr. *Rodwell.*] We are perfectly willing to treat upon arbitration terms with Mr. Reuter?—Yes.

2020. Mr. *Vernon Harcourt.*] I should have liked to have seen that offer made to the opponents whom you have bought off; I should have liked to have seen that offer of arbitration terms made to the Railway Companies or to the Electric and International Company?—The principle is arbitration from first to last.

2021. Yes; arbitration as far as shall conceal what the public have to pay, and we have no wish that the public should know what they have got to pay. We are quite willing to come into the secret treaty with them if you only give us our value. We will assist you in concealment as far as ever you like; we have no objection; we do not want to let the cat out of the bag any more than anybody else, if you will only deal fairly with us; if you will give us 20 years' purchase and then arbitration as to what Mr. Mantalini calls the total. We will wait until we see what the Submarine Company have got?—We wish to deal quite fairly with you.

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Re-examined by Mr. *Rodwell.*

2022. The whole question between Mr. Reuter and yourself is the question of amount; he is willing to sell if he can get you to give him his price?—Undoubtedly; and we are willing to buy if he will take our price.

2023. And if you cannot agree at all upon that, you are perfectly willing that it shall be settled upon the basis of arbitration?—Undoubtedly.

Mr. *Rodwell* stated that he had no further questions to ask the Witness.

Mr. *Winkworth* stated that he represented the Universal Private Telegraph Company; that he had received a telegram from the chairman of that company from Manchester, saying that in consequence of a letter which he had received from Mr. Scudamore he should wish to have an opportunity of examining Mr. Scudamore as to certain agreements between him and that company, and that he would wish to be allowed to reserve his right of doing so until to-morrow.

Mr. *Rodwell* stated that he would not attempt to shut out Mr. Winkworth from doing so.

Witness.] No agreement has been actually entered into; he made a proposal which we have not been able to entertain.

2024. Mr. *Goschen.*] I understand you to hold that submarine cables ought not to be bought at the same number of years' purchase as telegraph business generally?—That is what I have been told.

2025. That is why you offer 10 years' purchase to Mr. Reuter instead of 20 years?—I think if you read the agreement upon which we are to come in and buy, you will perhaps see it more clearly.

2026. Is it an important element that being submarine and exposed therefore to certain risks, that kind of property is not worth so many years' purchase as the other?—That is an additional element in my calculation.

2027. And you hold generally that you could not pay so much for submarine cables; you would not give 20 years' purchase for a submarine cable?—I do not say that I would not do so under all circumstances; but in that particular case I am advised that a cable has only about 15 years' life, and that two of this cable's has run out.

2028. What do you mean by 15 years' life?—That it wears out at the end of 15 years; but I have also been told that there are particular risks in this case, the part of the sea where it is laid is of such a character that if the cable broke, which is a contingency which happens to all cables, but in which event any of them can be restored, it would be difficult to recover this cable.

2029. With regard to the cables between England and Ireland how many cables are there?—The Electric Company have a cable, I think, to Wexford, and the Magnetic Company to Dublin.

2030.—How long have they been laid?—I cannot inform you.

2031. Are you not going to take that into consideration in buying that cable?—Yes; but they are only a small part of the whole undertaking.

2032. How much?—That I will ascertain for you to-morrow. I know it is a small amount, but I have not got the exact figures.

2033. Have you any idea of the amount of the value of those cables?—I can work it out, but I could not state it now.

2034. You have not taken that risk into consideration at all in buying the electric telegraph undertaking?—No, I have not; I looked upon that as only part of the whole undertaking.

2035. Surely whatever part it is it ought to be taken into consideration *pro tanto*, ought it not. What I mean is, supposing there is another company which you buy for 20 years' purchase, which has got no submarine cable, and you have another company which has a submarine cable, you cannot pay the same price for the two?—I have always assumed that the arbitrator in assessing the net profits would look into these matters. If he found a cable which was just going to drop to pieces he would assume that what appeared to be net profits were really something more than the net profits.

2036. Then

2036. Then you hold that the arbitrator would have to take into consideration the wear and tear which they would have suffered up to a certain point?—Supposing they were found not to have been kept in proper order, he undoubtedly would have to take that into account.

2037. But supposing them to be kept in proper order, take the case of the submarine cable between England and Ireland, do you consider that the arbitrator would take into consideration how many years that cable had been laid?—I certainly should put it to the arbitrator if that cable were in working order; but if it had only been kept so by patching, and it were likely to come to an end in the course of a year or two or even a longer time, that he must make an allowance to us on that account.

2038. Do you mean to say that you would hold, that from the net revenue, certain deductions ought to have been made in order to form a sinking fund to provide a new cable?—Yes, I do. There are sinking funds undoubtedly, and I contend that anything which properly belongs to the repair of a cable on turning over the property to us in efficient order, must be taken into account by the arbitrator.

2039. Then the net revenue does not imply the difference between the gross receipt and expenditure?—No, not in my belief.

2040. But, besides the expenditure, you ought to deduct a certain sinking fund for keeping such things as submarine cables in repair?—I think that the property ought to be handed over in fair working order; and if, in order to raise the amount of profit, it has not been kept in fair working order, some allowance must be made.

2041. It may have been kept in fair working order, and still not be as good as when it was new?—Precisely so.

2042. A cable which has been down for 10 years is not so good as a cable which has just been put down, though it has been kept in good order?—I think that the probable duration of the life of a cable ought to be taken into account by the arbitrator, and it certainly would be. I should endeavour myself to induce the arbitrator to inquire into it.

2043. Would that come under the term of net revenue, do you think, fairly?—My impression of net revenue is that it is the difference between the gross revenue and the sum required to keep the plant in working order. I think, supposing that the company were going on under their own management, that is what the shareholders would consider, that their directors were bound to expend as much upon the plant as would keep it in good order from year to year.

2044. To provide a sinking fund, you mean?—Yes, to provide a sinking fund.

2045. Mr. *Norwood.*] You allude to the system which is adopted by steamboat companies, of having a boiler renewal account and a general depreciation fund?—Yes; but whether they provide a sinking fund or not, I think, when they come to sell their property, they should be obliged to show that it really had the value which it is supposed to have.

2046. Mr. *Goschen.*] Have you gone accurately into the accounts of the companies?—I have only examined their published accounts.

2047. I see that, in your return presented to Parliament, the accounts of the companies are left out?—Yes.

2048. But have you seen those accounts, and have you analysed them?—Yes, their published accounts.

2049. Is it from those accounts that you made your original estimate of the expenditure of the companies?—Yes.

2050. And what did you make the amount of expenditure of the existing companies?—I do not think that the annual expenditure is stated in the return at all, and I have not got it here. The account which I made up was an account of the working of each company from its commencement to the date of my estimate, in which the whole of the revenue from the first and the whole of the cost from the first was stated; it was not stated from year to year.

2051. In your first report, in July 1866, you give the total expenditure, as you have stated it in your evidence 456,000 *l.*?—That is the total estimated expenditure under the Post Office plan.

2052. That was based at the time upon the expenditure of the companies?—Yes, plus additions.

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2053. I do not think you give in this report the expenditure of the companies upon which it is based?—No, in this report I do not, but I think I did in a subsequent one.

2054. In your report of February 1868, you gave the amount of the working expenses of the four Telegraph Companies as 345,000 *l.*?—Yes.

2055. I gather that in your original estimate in 1866 you gave the probable cost to the Post Office as 456,000 *l.*?—Yes.

2056. In your report in February 1868 you gave the probable expenditure as 425,000 *l.*?—Yes.

2057. And now you give the probable expenditure as 380,000 *l.*—Yes.

2058. That is to say, in every successive estimate your estimate of expenditure has decreased?—Yes, for the reasons which I have explained to the Committee this morning.

2059. On the other hand, in every successive estimate of the cost of purchase your estimate has increased?—No, not quite so, I think.

2060. I think you began with 2,400,000 *l.*?—Yes, I beg your pardon, that was so.

2061. Then you mount up to 3,000,000 *l.*, and now we are at a sum considerably beyond that?—Yes.

2062. Therefore, it is fortunate that you find that your estimate of the expenditure has been able to decrease side by side with the progressive increase in the amount of the purchase-money that will have to be paid?—Undoubtedly.

2063. I say fortunately, because if it had not been so there would have been no margin at all?—No, I think there is a large margin in each case.

2064. We will try and make that out; your original estimate of expenditure was 456,000 *l.*?—Yes.

2065. And your minimum estimate of receipts is 467,000 *l.*?—Yes, provided there is no increase at all; but to that is to be added 12,000 *l.* and 45,000 *l.*

2066. *Chairman.*] Is that the estimate of the inland messages alone?—Yes, inland messages only, as all the estimates were.

2067. Mr. *Goschen.*] To that 437,000 *l.* you have to add 12,000 *l.* for press news and 45,000 *l.* for continental messages?—Yes.

2068. Therefore, you would have in round numbers 495,000 *l.*?—Yes.

2069. Against an expenditure of about 456,000 *l.*?—No, not at all; that estimated expenditure of 456,000 includes the estimate for the increase of business, which you are striking out from revenue; but, then, in comparing my estimates for the previous years you must compare them with the present maximum estimate and not with the minimum estimate, because all those estimates include something for increase of business, and in my minimum estimate no increase of business is taken into account.

2070. You started originally with an expenditure of 456,000 *l.*, and you have added nearly 120,000 *l.* for extensions made by the Post Office?—Yes; but if you will allow me, that estimate was made in a totally different way. If you will refer to the new estimate of the 6th of February 1868, which is made upon the same principle as the maximum estimate which I have given this morning, you will find that they will compare more accurately. The estimate of February 1868 you will find at pages 146 and 147 of my report.

2071. As a matter of fact, the more you have looked into the matter the more you have found that the expenses decreased?—The two first estimates tallied very closely together indeed, as to the estimate of expenditure. It is only since I have been able to get more complete data as to what the companies themselves would save by amalgamation that I have really brought down the estimate.

2072. Then your being able to get more complete data as to the expenditure is contemporaneous in date with the higher terms offered to the companies?—There is no doubt that they have been more willing to communicate information since we have been on good terms with them.

2073. Since you have been on good terms with them, as I understand, figures have been put before you to show that you might buy with advantage to yourselves, whereas before it was considered to be much more expensive?—No, it is not quite so, nothing has been put before me; I have had to ask for everything that I have wanted, only before if I had asked it, I could not have got it; that is the only difference.

2074. How then did you get those figures before?—The mode in which we obtained them is shown throughout that report. With regard to their total expenditure,

expenditure, I took it from their published accounts. The only item which I have obtained from them, is the item of what they think they could save by amalgamation; I could not get that before, but now they tell me what they think they could save.

2075. I do not see that; I see here that the expenditure at the starting point is 330,000 *l.*?—Yes; and then there is a deduction.

2076. But that 330,000 *l.* represents an increasing sum, it is 325,000 *l.* in 1866?—In the year 1866, there were exceptional expenses, on account of the snow-storm, which they charged to capital, but which I, in making up that account, put into the ordinary working expenses.

2077. Since that, there has been an addition to their business of a million and a half in the estimate?—Yes.

2078. Do not you allow anything for the additional cost of that?—I have no allowed anything; but a very small addition will suffice for those additional messages.

2079. They can increase their business by 25 per cent., without increasing their expenditure you think by 10 per cent.?—They could increase it 105 per cent., with only an increase of 33 per cent. in the expenditure.

2080. With 25 per cent. they would increase 8 per cent. then?—I do not know that that would follow.

2081. It is a fair assumption that if 105 per cent. gives 33, 25 per cent. would give 8?—It might do so.

2082. Then you would have to add 8 per cent. to that 330,000 *l.*, and 8 per cent. upon 330,000 *l.* would be about 25,000 *l.*?—Yes.

2083. You would have to add that to the cost?—Yes; it is an account of all those probable additions that I have chosen to give those two estimates, a minimum estimate and a maximum estimate.

2084. In your minimum estimate I do not see that you allow anything more for the expenditure?—No.

2085. Therefore, you have not allowed anything for this 25 per cent., which, I maintain, ought to be added to the expense in any estimate which you have framed?—No, I have not added anything for increased cost arising out of the increase of business between the 31st of December 1866 and the 30th of June 1869.

2086. If you add 8 per cent. to that you will increase by 25,000 *l.* the cost of working?—Yes, in each case.

2087. Because you have taken as a credit sum, so to speak, in addition 25 per cent. in what you purchase, so you must allow that it will cost something more on the other side?—Yes, undoubtedly.

2088. With regard to messages, you have taken 4,125,000 1 *s.* messages, which is rather more than half of the whole telegraphs?—Yes, 55 per cent.

2089. To those no boon is offered at all by the Post Office system?—No; but if you will permit me, I should tell you that that 55 per cent. is not the proportion which was attained in 1866; it is the proportion at this moment. I mean that it is not as if in 1866 the proportion was 55 per cent.; it is now 55 per cent.

2090. How did you get those figures?—I got them from two of the largest companies.

2091. What companies were they?—The Electric and International Telegraph Company and the British and Irish Magnetic Company.

2092. Over what time did their calculation extend?—They took the workings of this year.

2093. For the last six months?—Yes.

2094. And the greatest increase is in the high messages between England and Ireland; that is where you expect the greatest increase?—Yes, undoubtedly.

2095. And you think that you may rely upon this, that the same considerations which would cause any increase in telegraphy between London and Birmingham, or between London and Manchester, in consequence of the reduction of the rate, would apply to thinly populated and very distant districts?—No, I think that they would apply to such cities as Belfast, Cork, and Dublin, where, of course, the bulk of the messages would be.

2096. But you have allowed for the whole of the messages?—Yes.

2097. Have you allowed it on the same scale as in Belgium?—In one case, but not

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not in the allowance of the increase of 150 per cent.; I did not take Belgium there; I only took Belgium in the case of the 1 *s.* 6 *d.* messages.

2098. What did you take in the case of this 150 per cent.?—I took an estimate which was given to me by the officers of the companies; they gave me a higher estimate than that, and I cut it down.

2099. You have no analogy for that?—No analogy; there are no parallel circumstances.

2100. Take for instance the highlands of Scotland; do you think that if you reduced the rates of the telegraph to the highlands that would give an increase of 150 per cent.?—I have no doubt whatever that there would be a very large increase of business in the highlands; I do not mean to say that it will go on all the year round; but take the next month and the following month.

2101. But we must have an average over the 12 months?—But there would be enough business in three months in the year in Scotland to give an excellent average for the year at a low rate; it is not merely grouse, it is herrings also.

2102. Can you give at all the proportion of the messages to towns in Ireland, as regards the messages to the country?—I have not that information.

2103. Would you expect that the country messages would be increased in the same proportion as the town messages?—I should expect that at certain seasons of the year there would be a very large number of messages from Ireland; in the season when tourists visit Killarney and the Wicklow mountains, and so forth, there would be an immense amount of business, which would compensate for the slackness at other times if the rate were low; and also the Irish coast has fisheries, and fisheries are very apt indeed to use telegraphs when they can do it cheaply.

2104. Your scheme, as it stands, has this effect, has it not, that you give a great relief to those who pay dear for their telegraphs now, but no relief at all to the 1*s.* ones?—Yes, that is true, except that we give them increased facilities.

2105. Do you think that that would be borne with as much patience by those who pay 1*s.* for their telegraphs, as it is borne by those who pay 1*d.* for their letters?—Yes, I think it would; I do not mean to say that in the course of years there would not be a cry for a sixpenny rate. I am very much of opinion that a sixpenny rate will eventually pay very well, but I should say that they would be perfectly content, because you must remember that those who are paying 1*s.* for telegrams are also paying 1*s.* 6*d.*, 2*s.*, and 3*s.* somewhere else. Take a Birmingham man, although he only pays 1*s.* for his telegram to London, he pays 3*s.* for his telegram to Belfast, so that it is incorrect to suppose that the people who send a shilling telegram will get no benefit through the reduction on the others.

2106. As a matter of fact in the case of the Post Office, has no pressure been put upon you at times to diminish the cost, even of the 1*d.*, in the big towns?—Yes, we have had applications for a halfpenny rate in large towns. When I say in large towns, it has only come from one town.

2107. Could you mention the town?—Liverpool.

2108. Liverpool is the place where they are prepared, as you are informed by the President of the Chamber of Commerce, to pay 1*s.* or more for the advantage of other parts of the country having telegraphic communication cheaper?—I am not quite sure that they are always consistent in their representations; when they want anything they generally take the strongest way of stating their case.

2109. Mr *Turner*.] I think that the President of the Chamber of Commerce of Liverpool stated that he would be willing to run that risk; he thought that the 1*s.* rate would be amply remunerative, but if it was not the public community would bear the risk of its not being remunerative?—I understood him to say so.

2110. *Chairman*.] The Liverpool people will gain a great advantage from the reduction on the Irish messages, will they not?—Yes; and not only that they will gain an advantage in the reduction to London, which would be 1*s.* instead of 1*s.* 6*d.*, and in the reduction on the messages to Scotland, too.

2111. Mr. *Goschen*.] You lay great importance, I presume, on the uniformity of the rate?—Yes. There are many great advantages attendant upon that; and

it would enable us to introduce stamps, which would very materially simplify the accounts and reduce the expense.

2112. And you look upon uniformity as an essential part of your scheme?—Yes, I do look upon it as an essential part.

2113. You do not think, for instance, that the fact of the messages being transmitted by the submarine cable ought to involve higher charges?—No; I think that we should look upon the country as a whole; we do not consider that we ought to charge the Irish letters more because we have to pay a very heavy sum for the conveyance by the North-Western line and across the Channel by fast-speed boats. We take the country as a whole, and we look upon the submarine cables as equivalent to the fast-speed boats and the Irish mail trains.

2114. Have you taken into your consideration, in your general budget of receipt and expenditure, such risk for instance as the breaking of the cable between England and Ireland?—No, I have not. Such risk we should be liable to, but we should not be liable to it every year; it would only be on the average.

2115. There is one broken now, is there not?—Then it has broken for the first time.

2116. Have you not made allowance for that in your estimate of the expenses?—No, I have not, any more than they made allowance for it.

2117. Do not you think that it would be prudent to do so?—I have allowed 10,000 *l.* for working and maintaining the cables; we are going to get rid of the submarine cables between England and the Continent, we are relieved of that risk altogether; it is simply the cables between England and Ireland, and the Submarine Company are willing to maintain them.

2118. *Chairman.*] How about the Channel Islands?—I cannot answer the question about the Channel Islands; we should work that ourselves; the Submarine Company will look after all our cables.

2119. Mr. *Goschen.*] In looking after them, who would bear the risk if they broke?—If a cable required to be replaced we should have to replace it.

2120. The Submarine Company would work them between Ireland and England?—They would work them and they would look after them; they will keep a ship for the purpose and they will look after them all.

2121. Do not you think that it is important to get an estimate of the total cost of all those cables, so as to see what per-centage one ought to allow to put by?—I can do that if you wish.

2122. Because it strikes me that it might be necessary to make an allowance of say 10 per cent. or whatever it might be, in order to cover the possibility of repairing the cable?—I think possibly it might be advisable to do so.

2123. As a matter of fact do you know that those companies which have the submarine cables make a larger sinking fund for such contingencies than the other companies?—I do not know that they do.

2124. Could you give any kind of analysis of the expenses of the various companies; can you say how much is for salaries and how much for station expenses and so forth?—I can give it substantially from their printed reports.

2125. Have you such a statement with you?—No, they will all be separate, but I will have an abstract made for you by to-morrow morning.

2126. It has not struck you, has it, what proportion of the expenses were for repairs and for keeping the posts and wires and so on in order?—Yes, I can show you what they were and the whole outlay; in the first estimate which I made I gave it; if you refer to page 38 you will see that I have put down, "For maintenance and repairs of lines, *i.e.*, the actual cost to the four existing companies in 1865 with an addition of 10 per cent. to meet the extensions made by the Post Office." I say that it would be something under 130,000 *l.* in that year, and I have no reason to suppose that it is more now.

2127. Those figures have been taken from the accounts of the companies, have they?—Yes, those figures have.

2128. What is the total paid-up capital of the companies that are in existence now?—With regard to the land companies, I think that the total paid-up capital is somewhere about two and a half millions; I cannot speak quite positively, because one company has got new shares, and perhaps more is paid on that account than when I last made the estimate.

2129. Could you mention at all the average dividend that they pay?—The highest dividend paid by the largest company is 10 per cent., and that is on all its

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shares. The second company has paid 8 per cent. on all its shares. The United Kingdom has paid on its preference shares only, and I think that it has two or three classes of preference shares. The London district has also paid only on its preference shares, which, I think, are at 10 per cent.

2130. They have not paid any dividend upon their ordinary shares, I believe?—No.

2131. Taking the average of the companies, do you think that they pay more than 5 per cent.?—Yes, certainly; the capital of the two large companies is very much the greater part of the whole.

2132. What are the proportions?—The electric would be about 1,200,000 *l.*, and the magnetic 800,000 *l.*; say two and a half millions altogether.

2133. Do they pay 10 per cent?—One pays 10 per cent. and the other pays 8 per cent.

2134. Have you checked your calculations at all in this way; have you taken the average receipt for the messages and the average cost of those messages, and seen whether the balance corresponded with the profits?—No, I have not; but I will do so.

2135. You see that they have other items besides the average cost of their messages; they have their press news and their continental traffic, and so on?

2136. I do not quite understand about this 45,000 *l.* for continental messages, and you did not know anything about that in 1866 either?—I knew that there was continental traffic, but I did not know what it was.

2137. How was it that you left that out of your estimate altogether?—I desired to make a moderate estimate, and to deal with the inland messages only, they being the only messages upon which we were going to operate in point of reduction of rate.

2138. But you took in the 1 *s.* messages where you were not going to have a reduction of rate?—I did not know what the proportion was, and therefore I was obliged to take the messages as a whole; now that I have got the information, I make out the estimate in a proper way.

2139. Had not you, then, deliberately left out in 1866 the whole of the continental traffic?—Yes, I deliberately left it out, knowing that I had got a balance behind; so that if anybody said that my estimate was too extravagant, I should be able to say there is the continental traffic at the back of it.

2140. You did not allude to it in your report?—I think I did, but there is no question that I left it out. I worked on the inland messages only, and I had an additional reason for doing that, that I was comparing it with the working of the inland messages only in the Belgian system, and therefore I left the international and transit correspondence out of sight altogether.

2141. But it seems you left it out not only in your estimate, but you left it out in your financial statement as to how much it would pay the public?—Yes, I did; I know that it was to my own disadvantage that I left it out, but I left it out purposely; at least, I will not say purposely, but I left it out knowingly.

2142. But those continental messages are sent by the submarine cable, I presume?—They are messages passing not only through the submarine, but through the electric and international, and Mr. Reuter also; that 45,000 *l.* is the balance of the whole continental traffic, after paying the working expenses.

2143. Are you going to lease those lines?—That is the intention.

2144. First, you are going to buy them, I understand?—Yes.

2145. Then you are going to lease the submarine portion?—Yes.

2146. I do not understand what this 45,000 *l.* represents?—It represents the net profit that we shall get after having satisfied every obligation with regard to continental messages, all the working expenses of which have been paid. Of course, it is assumed that the obligations of Mr. Reuter will have been fulfilled. That is the net profit.

2147. Does that 45,000 *l.* represent the sum which the Submarine Company, or whatever company will lease your lines, will pay you as rent?—Yes, what they will hand over to us; it will be the produce of a certain proportion of messages minus the proportion of working expenses.

2148. Did you have that in February?—No, not at all.

2149. Have you got any more plums that we may have light on which you have kept back in order to make your calculation better?—That will depend, I think, upon the demand for plums in the market.

2150. Is

2150. Is that your sole reason for leaving out this 45,000 *l.* in February, or are there more sums of 40,000 *l.* or 50,000 *l.* which we may look to?—I think if we take it in the form of the estimate, upon examination I might be able to show, perhaps, that I have underrated some other parts of it, but I have got no more plums under the item of continental traffic, certainly.

2151. Nothing as good as that?—Nothing as good as that.

2152. You will be prepared to put in a rather closer estimate as regards the probable expenditure; will you be able to analyse your 291,000 *l.* and show how much will be wanted for repairs and for sinking fund?—I shall be prepared to show the proportion of each class of expense in the total expenditure of the Telegraph Companies. I do not mean to say that it will remain with us in precisely the same proportion; we may spend less for salaries, and we certainly shall spend less for officers, for instance, and we may spend less for salaries; but I will show you how that expenditure is divided.

2153. Could you check their charges and their analysis of expenditure by a calculation of your own as to how the service will be worked by the Post Office?—I am afraid it would take me too long to make a calculation of what we shall have to expend under each head. I have been endeavouring quite recently to find out what charge we shall be at for delivering messages in the country, and that works out extremely favourably; but there are a variety of other items, and it would take me too long to enable me to put it before you completely.

2154. Can you tell me of the total cost how much of the 2,500,000 *l.* is represented by actual plant?—Yes, I can tell you that, but I do not know that I can tell it you now; I find that the companies have expended in construction somewhere about 2,200,000 *l.* or 2,300,000 *l.* I am not quite certain of the amount. I think it is probable that I am within the mark rather than over it.

2155. Do you happen to know whether the expenses of putting down telegraphs have increased or decreased; could you do it now for 2,200,000 *l.*, if you were to try to do it?—I could do it for very much less, I should think now; there is no question of that.

2156. Do you think that 5 or even 7½ per cent. on 2,200,000 *l.* would be an extravagant sum to put by every year for repair and maintenance?—Yes, I think it would be altogether too much. I think it would be quite enough to put by a sinking fund of 10 per cent. on the revenue. If you put by 7½ per cent. upon what you have already spent for construction, that being nearly the whole capital of the companies, there would be nothing left to them for dividend.

2157. Have you informed yourself how often, for instance, posts must be replaced; in how many years?—I have some information upon that subject, but not here, and I do not carry it accurately in my head. The whole plant is of course in a constant state of renewal.

2158. It would be a guide to us if we knew how often the posts have to be renewed; do you think, for instance, it would be every 15 years?—I will not undertake to speak without inquiry.

2159. What would you call the per-centage of wear and tear?—That also I must inquire about.

2160. You say 10 per cent upon the revenue; would not it be the safer way of calculating to say, What does my plant cost me, and how often must it be renewed?——

Mr. *Rodwell.*] The post and all the plant are maintained out of revenue every year before the 10 per cent. dividend is declared; that is the fact as I am informed.

2161 Mr. *Goschen.*] Do you know what sum would be devoted to the repair of the posts and wires out of their revenue, or how much has been annually put by?—As Mr. Rodwell says, they have maintained their plant, I suppose, in efficient order, and they have always charged the whole cost of maintenance to revenue.

2162. But Mr. Rodwell did not give us what sum annually is spent by them upon that?—I will obtain that for the Committee. You see that in 1865 it was something under 120,000 *l.*, and that is 5 per cent. upon the cost.

2163. Will you give me the dates at which the various companies have contructed the chief part of their work?—At page 73 of the Blue Book is an account going back to 1855, and it gives the length in miles of the telegraph lines of each company in each year, from 1855 to 1865. At the end of 1855 the Electric

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Company had 5,228 miles of line; in 1856 they had 5,398 miles; in 1857 they had 5,637 miles; and in 1858, 6,103 miles.

2164. They go on increasing gradually?—Yes; in 1863 they had 8,282 miles; in 1864 they had 8,658 miles; and in 1865, 9,306.

2165. Then we come to this point, do we not, that there were in round numbers 8,800 miles of telegraph lines in 1855?—Yes, about 8,800.

2166. And at the end of 1865 there were 16,000 miles in working order?—Yes.

2167. The point is this, is it not, that only one-half of the existing length has been in working order for 13 years?—Only half the existing number of miles have been open for 13 years.

2168. And you might say that in the meantime about 13,000 miles have been in working order for six years?—Yes, but those are only miles of line; the wires upon those miles of line may be some newer and some older.

2169. But you see this, do you not, that none of those telegraphs have been in existence long enough to make it necessary to have the wires or posts renewed?—But 1855 was not the commencement of their existence by any means.

2170. It is the commencement of the existence of 8,000 miles, because there were 8,000 miles then, and there are 16,000 now?—Yes; but this is merely the commencement of the returns of the Board of Trade; they had been in existence for a considerable time before, what number of miles they had I cannot tell you.

2171. At all events we see that they have been continually increasing, and a very great proportion; in fact, one-half of the present telegraph lines have not been in existence for 13 years?—It may be less.

2172. And it would naturally be that during the first 10 or 20 years of the life of a telegraph company, it would require less for the repair and reconstruction of its plant?—But you will remember that in this case the past life of English Telegraph Companies has been the infancy of telegraphy as it were. In their early history neither were the wires so good nor were the means of insulation so well studied, nor was the cost of renewing and repairing them so accurately known and ascertained.

2173. You mean to say that now you put up much better posts and better wires than were put up in the beginning?—I mean to say that in all likelihood the work done since 1865 has been very superior work to the work done before, and that all additions to the property of the companies since that time are much more valuable than the property which they had before.

2174. Then, you will buy a great proportion of that which will soon require renewal, and was laid down before 1855?—I should very much doubt whether we are buying any wires that were in existence at all then; not many, at all events.

2175. That means to say that you think that in the period of 13 years, or I will give you 15 years, they have renewed nearly the whole of the wires?—I must not say that, because it is not within my knowledge, but I will endeavour to obtain proper information upon the subject.

Mr. *Rodwell* stated that he was informed that the wires and posts were practically as good now as they were 15 years ago, that they have been renewed every day, so to speak, and are constantly kept in as good a state as they originally were in.

2176. Mr. *Goschen*.] You say that practically the whole of the plant of the Telegraph Companies is renewed in 15 years; that means to say that you must put by 6 or 7 per cent. in order to replace that plant?—No, it does not; we must renew it out of our revenue, as they have renewed it out of their revenue, and as we have provided for it in our estimate.

2177. But it means to say that out of your ordinary revenue you must go on renewing your plant from day to day?—Yes; and in my estimate I have made full provision for that.

2178. Therefore I think you will agree with me that you must, out of revenue put by at least 6 per cent. on the capital?—No; you are not to renew your plant out of your revenue and then put 6 per cent. by as a sinking fund to renew it also.

2179. I do not want to put any sinking fund by, but what I say is, that your repair and renewal will cost you upwards of 6 per cent.?—In my estimate of expenditure, the full allowance for renewal is necessary to be taken in.

2180. In

2180. In your estimate of expenditure, you have not taken nearly as much as that, because you have merely taken 130,000 *l.*?—No, I beg your pardon; if you will allow me to refer to the estimate which you have before you, I have taken first the expenditure of the Telegraph Companies, which includes the cost of maintenance, and I have merely taken off from that what one thinks we can save in salaries and rents, but I have taken off nothing for cost of maintenance. Then I have added the cost of maintenance on their portion of the property, and then I have made an addition for increase of business, which of course also includes the cost of maintenance.

2181. I do not know whether you see my point; it is admitted that in 15 years the whole of the plant has got to be renewed?—Yes, I admit that it is renewed in the course of 15 years, but it is renewed by regular deductions from the gross revenue.

2182. As it cost 2,200,000 *l.*, you must divide that by 15 and that will give you the sum annually you have got to employ upon revenue— —

2183. Mr. *Sargood.*] That includes your apparatus and expensive machines?—Yes; and leasehold property also.

2184. Mr. *Goschen.*] The question which arises in my mind is, whether you have allowed sufficient for repairs, and I doubt whether you have?—I think, with all respect my answer is this, that I have allowed all that the companies allow out of their annual revenue for maintenance, and I have added 10 per cent. for our maintenance and extensions, and I have then put on a large increase of 33 per cent. to meet increased business, which also includes the cost of maintenance on the increased business.

2185. If you were to say that 10 per cent. in a matter like telegraphs, where wires and posts must be renewed, were not an extravagant item to put by as you would do in shipbuilding, or anything else, you would get at a sum of 220,000*l.*, whereas you do not take more than 130,000 *l.*?—But if that 130,000 *l.* has been found ample by the Telegraph Companies to keep the plant in good working order, why should more than 130,000 *l.* be taken now?

2186. Because 130,000 *l.* has been taken during the earlier period of the Telegraph Companies when, of course, the plant was newer than it was later on; if you buy something while it is new, it does not cost you so much for repairs as it will do later on?—It is probable, looking at our extensions from year to year, that there will be just the same proportion of new plant that there ever was.

2187. Mr. *Turner.*] I understand that the posts and wires will require renewing, and, in fact, that they are renewed in the course of every 15 years?—Yes.

2188. The Right Honourable Member for the City of London takes 10 per cent. upon the whole capital for that?—Yes, at that time.

2189. What proportion to the total cost of the line does the cost of posts and wires bear?—I am not prepared to say that.

2190. What I mean is this, that the buildings for instance, and the apparatus and different things of that kind, and the patents which are also included which cost a great deal, all these things do not require renewing in the course of 15 years?—No, patents especially do not.

2191. Patents are paid for at once, are they not?—Yes.

2192. Therefore, when the Right Honourable Member speaks of 10 per cent. upon the whole of the capital as involved in the renewal of posts and wires in the course of 15 years, he has based his calculation erroneously?—He makes a very liberal allowance, indeed.

2193. For the posts and wires that require renewing during the 15 years, 130,000 *l.* is quite sufficient for that purpose, and for any renewal of buildings, and so on?—Yes.

2194. It does not follow that it requires a per-centage upon the whole of the capital to do that of 6½ or 7 per cent.?—No, it certainly does not require a per-centage upon the capital, in addition to the sum actually expended in putting the plant in proper condition at the end of each year.

2195. If the per-centage of the whole capital is 220,000 *l.* a year, it does not follow that that is necessary for the mere purpose of renewing posts and wires, and keeping other plant, buildings, and so on, in good order?—No, because the whole of the capital was not expended in posts and wires.

2196. Mr. *Goschen.*] You forget, or the Honourable Member forgets, that I asked you particularly what proportion of the 2,500,000 *l.* was employed in the plant of the companies, and you told him that it was 2,200,000 *l.*?—If I led you

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you to that construction I must have been misunderstood, and perhaps you will allow me to correct myself; the sum that is charged by the companies for the construction of works generally includes a very large expenditure from first to last in getting up their plant of all kinds; it includes the cost of their leasehold property, and it includes the cost of their patents, which is very considerable in each year, and it also includes the preliminary expenses in getting Bills before Parliament: it includes expense of every kind; it is not simply the manufacture of the mere posts and wires.

2197. Would you be able to put in a statement and analyze the two and a half millions of the companies; you are going to buy the assets of the companies, and some of those assets represent property, that is to say, posts and wires and instruments; assets which exist at this moment; another portion of it represents no value present at all; that is to say, a certain amount which has been spent on Parliamentary proceedings, patents which have expired, and so forth, would you be able to show what amount is to be placed in each of those two classes?—I should be very glad indeed if you would not ask me to put in any statement of my views as to the value of their property.

2198. I do not mean the value; I mean the cost. The capital accounts of the various companies will show what they have done with their capital, and it would enable the Committee to see what the public are actually buying?—I am quite sure of that; it would enable the Committee to see what they would buy as far as the expenditure of the companies is concerned; but that is not the only sum involved in buying the trade of a company. For instance, if I may take a very low case as an illustration, if you buy a public-house you buy something more than the building, and the pots and barrels and beer engines; you buy the trade which the man has acquired.

2199. Do you propose to put in the accounts of the companies which have not been printed in this book?—No.

2200. I presume the Promoters of the Bill, before we are called upon to decide upon the preamble, will give us the fullest information, both as to the receipts and expenditure, and everything connected with the companies.

Mr. *Rodwell* was heard to state that the Promoters were not prepared to do so, and even if they were to furnish that information it would lead to a very erroneous view of the matter, if it were to be supposed that they based their case upon the value of the property *qua* the plant and the mere receipts of the companies, and, by way of illustration, he showed that in purchasing, for instance, the "Times" newspaper, the value of the plant would by no means represent the value of the newspaper.

2201. Mr. *Goschen.*] I suppose you will be prepared to put before the Committee the vouchers for the expenditure, and to show the Committee how much has been put by for reserve fund, and soon, by the various companies?—I shall be prepared to show from the published accounts of the companies anything that they may have done, but I cannot undertake to do that which you require.

2202. Do you intend to call anyone from the companies to put us in possession of that information?—They have all been summoned.

Mr. *Rodwell.*] I understand that some have had summonses from Honourable Members of the Committee, but it is no part of our case. If we were to call them they would probably come, but as all the basis of this scheme is a question of arbitration, it would be very hard upon them to have to make statements here which might be used against them before the arbitrator.

Mr. *Goschen.*] The Committee, as representing the public, have to be satisfied of the fact themselves as to what they are buying.

Mr. *Rodwell.*] We are endeavouring to put it before the Committee in the best way we can, that we are buying a business that produces so much per annum, and the question, as I venture to submit, is, are you satisfied that the business is worth so much, and will produce so much upon the figures and returns given by Mr. Scudamore, and therefore I said at an early period that we were not going to put in an estimate of what the cost is, for we felt that we could not approach it in that way.

2203. Mr. *Norwood* (to the *Witness*).] Am I right in understanding you to this effect, that the reason of the difference between the estimates that you have given us to-day and the estimates that you have previously given, and which have been published in the Blue Books, is to be traced to the fact that you now possess information, owing to the arrangements that you have made with the Telegraph Companies, which you did not possess formerly, and which you could not have been possessed of formerly?—It is so.

2204. Then, do I rightly understand you, that the information which you now possess, shows that the telegraphs are a more valuable property than you previously believed them to be?—It shows me that they are so much more valuable a property that if you do not buy them this year you unquestionably will have to pay half a million more for them next year.

2205. Now, I want to come to the question which the Right Honourable Member for London has been cross-examining you upon; your figures, which are now before us here, are based upon the net incomes derived by the Telegraph Companies, and you propose to pay the Telegraph Companies 20 years' purchase upon the net profits, and those net profits are to be ascertained by arbitration? —Undoubtedly.

2206. In considering the net profits of the Telegraph Companies, you have to consider whether or not they have done what all honest traders having plant which depreciates and which wears out do, whether they have from year to year expended a sufficient sum to keep their plant in thorough good working order? —Undoubtedly.

2207. If upon investigation you were to find that the Telegraph Companies have been taking as profit what they ought not to take, inasmuch as they have not kept back a sufficient sum for renewals, you would, of course, not pay them those profits. You would not admit those profits?—Our view of the net profits is the difference between the gross revenue and the sum which they ought, in the interests of their shareholders, to have laid out upon their property.

2208. In order to keep up their plant to its value as a working concern?— Yes.

2209. There are two values in all these cases; the one is the selling value, which, of course, is a very depreciating value if the sale was a forced one, and another is the fair working value of an undertaking like this?—Yes.

2210. In the annual expenses, which you ascertain to be about 330,000 *l.* per annum, is included this very sum for renewals?—Yes, certainly.

2211. And you will take care, on behalf of the public, that there has been an ample sum deducted for renewal year by year?—As far as anything that I can do with the arbitrator is concerned, we will take care that that is properly represented to him.

2212. They must show you that for years they have expended a sufficient sum, or put by a sufficient sum, to keep their plant in perfect working order as the business has been going on?—Yes.

2213. If that be so I rather fail to see the point of the Right Honourable Member's observation to you as to further depreciation; the sum for depreciation already reaches 130,000 *l.*?—Yes, undoubtedly.

2214. You will see, in fact, on the part of the Government, that that has been ample?—That you may rely upon.

2215. *Chairman.*] May we not illustrate it in this way, that the human frame is said to be renewed in seven years, but it is not that at the end of seven years a new body is put in, but the process is going on from day to day?—I should not like to trust my body to renewal at the end of seven years altogether; I should prefer to have a gradually refreshed body.

2216. Mr. *Goschen.*] But you would have to renew 1-7th every year?—Not in addition; I think that the result of it is this: It would be as if you were to give me my daily refreshment, and compel me to put it in a bottle till the end of seven years.

2217. Mr. *Norwood.*] As the result of your further knowledge, you believe that you have given us all the calculations upon which you based your scheme? —Yes.

2218. The result of which is, that you think that you will effect an immediate saving of 130,000 *l.* per annum?—Yes.

2219. You consider that when all those debits and credits are adjusted you

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will have a mean revenue over and above the working expenses, and the renewals to the extent of about 280,000 *l.* per annum?—Yes, I put that as the probable mean.

2220. That is really the result of your examination to-day?—Yes.

2221. Of course, when you say that, you mean that you have previously expended all that is necessary to keep your lines in perfect working order?—Yes; let me say this in addition, in order to account for the discrepancy between my present estimate and my former ones, that my former ones were based upon the number of messages at that time, and my present estimate is based upon the number of messages a year hence, and therefore necessarily there is a higher estimate of revenue in this case and a higher estimate of expenditure than it was in the former case.

2222. Mr. *Goschen.*] At the bottom of the 36th page you make use of this phrase: "But looking on the one hand to the earnings past and present of the companies, and on the other hand to their past and present outlay, and to the regular depreciation to which their property is subject;" what do you mean by the words "regular depreciation?"—I certainly meant there the wear and tear.

2223. The business of Telegraph Companies is certainly liable to depreciation from wear and tear?—Yes; and for that reason they are compelled to devote a certain portion of their gross earnings to make it good, otherwise they would get higher dividends than they have been getting.

2224. You add the depreciation to the outlay, do you not? you do not consider it as one but as two elements, here you say, "To their past and present outlay, and to the regular depreciation to which their property is subject?"—Yes; however, I certainly did not intend those words to convey that they were to make good their property from day to day, and afterwards make it good at the end of the term.

2225. Do you think that the question of the regular depreciation of their property at all affects the question of 20 years' purchase?—No, I do not.

2226. Why not?—Because I think that we have already discounted their natural expectation of what they would get. I should say that they started by asking 25 years' purchase of prospective profits; we are only going to give them 20 years' purchase of their present profits. Their annual growth of profit is certainly not less than 10 per cent. at present. If you wait till next year and only give them 19 years' purchase, you will give them more than you will now give. If you wait two years, and give them 18 years' purchase, you will still give them more than you will now give, assuming the annual growth of profit to be the same. If you wait four years, and give them 16 years' purchase, you will again give them more, and in addition you will have lost the benefit accruing in the four years, which would have gone into their pockets instead of coming into the pocket of the nation.

2227. That is property which you call subject to regular depreciation; I should call it property which is subject to a considerable increase every year?—So it is, but it is subject to increase after providing for depreciation; I say that, after making those allowances year by year, there will be a growing increase of profit of not less than 10 per cent.; their own accounts will show that; and, in buying at 20 years' purchase, we are buying the prospective profits for the next 20 years, and the profits beyond that for ever.

2228. What is the maximum dividend which the companies may by their Acts of Parliament pay to their shareholders?—All the companies but one may pay any dividend that they can earn, I believe.

2229. Which is that company?—The Electric Company, I believe, cannot pay more than 10 per cent., but I understand that they can pay that 10 per cent. over every year of their past existence if they please; I believe I am right in that.

2230. Can you tell us for how many years they have paid 10 per cent. already?—Four or five years; three years certainly.

2231. How many years have they got to make up their back dividends?—Twenty-two years.

2232. Do you know at all what amount of per cents. would make up the deficiency in their revenue during that time up to 10 per cent.?—In the first three or four years of its existence they did not pay anything at all; they lost largely, so that they would have the full 10 per cent. for that time, and when they paid

3 or 4,

3 or 4, they would get 6 and 7 per cent. for that time, and so forth; one could easily make a calculation of what all the back dividends would be, but they would be very large indeed.

2233. Do you think that their back dividends would amount together to 120 per cent.?—More than that, I should think.

2234. From 1846 to 1864, that would be 18 years, and if they had paid nothing, it would only be 180 per cent.?—They did not pay anything for a long time.

2235. Would you be able to ascertain that?—I think it could be ascertained.

2236. If you propose to pay 20 years' purchase at a rate of 16 per cent. per annum, you pay them practically 6 per cent. more than they are entitled to have by Act of Parliament, do you not, but for the back dividends?—But Parliament has not prevented them from having their dividends back from the first year of their existence.

2237. Supposing it were not for those back dividends, would it be within the spirit of the Act of Parliament to buy at 20 years' purchase, and 16 per cent., when they pay only 10 per cent. to their shareholders?—I do not know that their present net profits are 10 per cent, but if they be 10 per cent., and we are to get 16, I am not prepared to say that 20 years' purchase is too much to give them.

2238. Then you would pay a company more than it is entitled to receive by Act of Parliament; what is to happen by Act of Parliament if they are paid more than 10 per cent?—I do not believe that they can pay more than 10 per cent., but there is nothing to prevent them in some way or other from getting the full benefit of their earnings, whether it is 10 or 20 per cent.; they can create new shares, for instance.

2239. Does not the Act of Parliament say that they are to reduce their tariff when they have paid 10 per cent?—No, I believe there is nothing of the kind.

2240. Not as in the case of Gas Companies?—No, there is no provision of the kind. In fact, it is an inoperative provision; they can in one way or the other get the full benefit of the profit, whatever it may be.

2241. Have you examined the Act with a view of seeing whether it is so?—I know that there is no power to make them reduce their rates.

2242. Supposing that it meant something, I must have meant that they were not to have more than 10 per cent?—It may be so, but the meaning abstractly is obscure.

2243. You are not prepared to say what it did mean?—Whatever it may have meant the effect is this, that they can get all they earn somehow or other.

2244. *Chairman.*] You mean that they could drive a coach and six through the Act?—Yes; they could create new shares, no doubt.

2245. Mr. *Norwood.*] Was not it the intention of Parliament, in restricting the Telegraph Company to 10 per cent., that the balance of the receipts should be devoted to the extension of their system and to the advantage of the public generally?—I do not think that the Act of Parliament expresses anything of that sort, although I have no doubt that that was the intention.

2246. If the Committee were satisfied that you were going to make a good bargain with the companies in purchasing up their rights, the public would get the advantage?—Yes.

2247. *Chairman.*] What is the basis of the purchase of the railways under the Act of 1844?—Twenty-five years' purchase.

2248. That is to say, the Government were entitled, under the Act of 1844, to purchase up any railways that were made after the date of that Act, after a certain time of working on the basis of 25 years' purchase of their net profits?—Yes.

2249. Mr. *Norwood.*] I presume that you will hand in to the Committee something like an approximate estimate of the amount that you will have to pay to the Telegraphs and to the Railway Companies?—No, we do not think of doing so; so much is referred to arbitration, and if any amount was agreed upon the competing parties for the plunder would all take advantage of it; we could not do that without doing the arbitrator's work.

2250. The arbitration really is this, to see that the statement of the net profits is a true and correct statement?—Yes, but in the case of the Railways it is very much more than that; it is an examination of all sorts of little rights.

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2251. I am afraid, then, that we shall not get all the information that we want?—I am afraid we cannot put in an estimate of that.

2252. I should like to see what proportion your revenue of 280,000 *l.* bears to the amount of capital that you intend to disburse?—I can only give you my opinion that the estimated net revenue will cover any capital that can possibly be wanted.

2253. We are to rest satisfied with your statement?—I do not say that you are to do that; but that is all I can say. During the vacation the whole amount to be paid will be ascertained, and then it will come before the next Parliament to confirm it, and Parliament will then have an opportunity, even if this Bill be passed, of saying that we shall not buy, and the Bill will then be inoperative.

[The Witness withdrew.

[Adjourned to To-morrow, at Half-past Eleven o'clock.

Friday, 10*th July* 1868.

MEMBERS PRESENT:

Mr. Goschen.
Mr. Graham.
Colonel John W. Fane.
Sir Frederick Heygate.
Mr. Leeman.
Mr. Norwood.
Mr. Potter.
Mr. Sandford.
Mr. Charles Turner.

THE CHANCELLOR OF THE EXCHEQUER, IN THE CHAIR.

Frank Ives Scudamore, Esq., called in; and further Examined.

2254. *Chairman.*] You put your maximum estimate of revenue at 358,000 *l.*?—I did.

2255. You could raise with that revenue, at 3½ per cent., the sum of 10,000,000 *l.*?—You could.

2256. You stated your medium estimate, half way between your maximum and your minimum, at 280,000 *l.*?—I did.

2257. You could raise on that, at 3½ per cent., 8,000,000 *l.*?—Yes.

2258. What I mean is this; that 358,000 *l.*, in the one case, and 280,000 *l.* in the other would suffice to pay 3½ per cent. interest, in the one case, on a capital of 10,000,000 *l.*, and in the other on a capital of 8,000,000 *l.*?—Yes.

2259. With regard to your minimum estimate, your minimum estimate was 203,000 *l.*?—Yes.

2260. A little over that, namely, 210,000 *l.*, would suffice to pay interest at 3½ per cent. on 6,000,000 *l.*?—It would.

2261. Without going into particulars, do you conceive that the total sum required for the purchase of all the interest agreed to be purchased, will in any case amount to more than the sum of 6,000,000 *l.*?—I do not think that the purchase of all the interests, including those even which are not represented in the estimate of revenue, would amount to 6,000,000 *l.*

2262. So that even supposing it should amount to 6,000,000 *l.*, taking your medium estimate there would be 2,000,000 *l.* to spare?—Yes.

2263. Taking your maximum estimate, there would be 4,000,000 *l.* to spare:

2264. Mr. *Potter.*] Supposing you pay 6,000,000 *l.*, 4,000,000 *l.* will be paid in premium for your goodwill?—I can hardly answer that.

2265. About that?—I can hardly answer that question.

2266. Mr. *Goschen.*] The aggregate you say would not exceed 6,000,000 *l.* Do you think under any circumstances whatever your 2,400,000 *l.*, your original estimate, can run up to 6,000,000 *l.*?—Yes, I think it can.

2267. The value of the property seems to have risen upon you from two millions and a half to six millions?—My original estimate allowed nothing whatever for goodwill.

2268. Your original estimate was based upon the value of the property, your original estimate allowed something for goodwill, did not it?—No, not a farthing; it merely allowed for the assets of the companies.

2269. Will you turn to the page in your book in which you state that that sum of 2,400,000 *l.*, your original estimate, was for the assets of the company?—My original report contained documents not in it now, and which showed that it was for the assets of the companies.

2270. You have never stated in any of the reports you have sent in, that it was based upon the assets of the company?—Not in plain words.

2271. Will you turn to that page in your report where you deal with the 2,400,000 *l.*, and see what you have said there?—"For obvious reasons I do not propose now to offer any opinion as to the precise price which would have to be paid for the business of each company. But looking on the one hand to the

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earnings past and present of the companies, and on the other hand to their past and present outlay, and to the regular depreciation to which their property is subject, and looking also to the estimation in which their property is held by the public and which is shown in the market value of their shares, I have come to the conclusion that the whole of their property and rights of every description might be purchased for a sum within 2,400,000 *l.*"

2272. After reading that, do you maintain that you merely spoke of the assets of the company in making that calculation?—I say that I have allowed nothing for goodwill.

2273. What are "rights of every description?"—I have not included in that term certainly goodwill; I have made no allowance whatever for compulsory sale, and have made no allowance for prospective profits.

2274. You have looked to the market value of their shares?—Yes.

2275. According to that, if the market value of the property was two and a half millions at that time, and we now run up to 6,000,000 *l.*, you are paying more than 100 per cent. above the market price at that time?—Above the market price of that time, I will not say 100 per cent., but something considerably above the market price.

2276. Does not the value of the shares represent more or less the goodwill as well as the dividend?—No, I do not think it does.

2277. Do you mean to say that the value of the shares merely represents the assets of the property when there is a good business being done?—There are many cases, no doubt, in which the value of the property is not represented by the value of the shares in the market.

2278. You think that those who buy shares consider that they are merely buying the posts and wires, but not buying the goodwill and existing contract?—No, I do not say that.

2279. However, I think you have admitted that it is about 100 per cent. above the market value of the property?—I can hardly say to what extent it is above the market value at that time, but I admit that my present estimate is very much above the past estimate.

2280. And while your estimate has risen from 2,400,000*l.*, I will not say to six millions, but to a figure not excessively at variance with six millions, how far has the property increased in value in your judgment?—No doubt the property has considerably increased in value, but you must remember that there is one element you must not leave out of sight, the two and a half millions does not represent the property which we are considering we shall get for 6,000,000 *l.*; it represents a smaller property than that.

2281. You have the railway business extra?—We have the railways extra, and certain other trades, Mr. Reuter, for instance.

2282. Can you state roughly the difference between the revenue now and the revenue then, so as to enable us to see how far the increased revenue will repay the public for the increased purchase price of two millions and a half?—I have no doubt we shall get back the full value of our money. If we are going to pay more it is merely because we are going to buy more.

2283. There is only the railways and Mr. Reuter?—There are several other trades, and a very much improved trade on the part of the Telegraph Companies.

2284. *Chairman.*] With regard to what the Honourable Member for London has asked you, when the Bill was introduced into the House of Commons, was not your estimate of the net revenue 180,000 *l.*?—Yes; in the paper which I drew up when the Bill was coming on for second reading, I put the estimate at 233,000 *l.*

2285. Before that, when the Bill was introduced, do you remember submitting to Sir Alexander Spearman and Mr. Anderson an estimate of the revenue?—Yes; that was 180,000 *l.* after I had made deductions amounting to about 50,000 *l.* for possible errors; the two estimates were substantially the same.

2286. Your present maximum estimate is 358,000 *l.*?—Yes.

2287. Which is nearly cent. per cent?—Nearly cent. per cent.

2288. When you made your original estimate upon which the calculations were framed for the purpose of the introduction of the Bill, was not it the fact that

that you had not taken into account a great deal of the profits of the four Telegraph Companies which you have since ascertained to exist?—Unquestionably.

2289. Is it not the fact that since you have been, I may say, on terms with the companies, with whom arrangements have been made, you have acquired information which was not at your disposal when you made your original estimate?—Undoubtedly.

2290. Is not it the fact that in that estimate you did not take into consideration the public trade of many railway companies?—Yes; neither did I take into account the revenue from the continental traffic.

2291. Your estimate was based upon your own knowledge of the number of inland messages and the profits derived from them?—Yes.

2292.—And that only confined to the four telegraphic companies?—Yes.

2293. Since that you have obtained information of a considerable amount of trade in the hands of Railway Companies acting as Telegraph Companies?—Yes.

2294. And you have added that to both sides of the account?—Yes.

2295. And you have also added to both sides of the account the very considerable business of foreign messages?—Yes.

2296. Therefore neither one side of the account nor the other represents the same thing as your original estimate?—No.

2297. In addition to that, have you reason to believe that the profits of the four Telegraphic Companies have increased since your estimate was framed?—As a whole they do not increase at a lower rate than 10 per cent. per annum.

2298. At the time the Bill was sent to a Select Committee, you had raised your estimate of the amount that would be required for the purchase?—Yes.

2299. Do you remember to what amount?—It was raised to 3,600,000 *l.*; that is, the property represented by the two and a half millions had in my estimation risen to 3,600,000 *l.*

2300. That was in addition to the sum which you thought would be required for extensions?—Yes.

2301. I understand you to say that you put 6,000,000 *l.* as the very outside figure?—As the outside figure.

2302. And you do not go into greater details in order not to give information to the companies that they may use before the arbitrator?—Yes.

2303. Therefore we are not to take 6,000,000 *l.* as your present estimate, but as the outside figure?—As the outside figure.

2304. Is the difference between the latest estimate you made when the Bill was before the House of Commons and your present estimate, based upon the information you have obtained as to the greater value of the property to be acquired than you were before aware of?—Unquestionably.

2305. Mr. *Leeman.*] Have you any objection to lay before the Committee the details of the estimate which is referred to in page 36 of your report, the details upon which the estimate of 2,400,000 *l.* is arrived at?—Yes, I have an objection.

2306. After the paragraph to which the Right Honourable Member for the City of London has called your attention, you say, "In making this calculation I have not lost sight of the fact that the letters to which I have referred put forth a claim for compensation to the paid officers of the companies; I submit however, that the paid officers of the companies must look to the sellers and not to the buyers for compensation, and that the price which I have named should enable the sellers to give such compensation as in their opinion may be due to those who have served them." In your judgment, at that time, all compensation which is now to be paid was included in the 2,400,000 *l.*?—Yes.

2307. "In addition to the sum required for the purchase of the business and rights of the companies, we should require for the extension of the lines and the construction of additional lines on the plan which I have described, and for additional instruments and office fittings, and for the education of force, about 100,000 *l.*"?—Yes.

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2308. You have doubled that also?—Yes, because I propose to give additional accommodation.

2309. Your estimate under that head is 200,000 *l* instead of 100,000 *l.*?—Because I go to a larger number of offices than I contemplated then.

2310. To how many offices did you then contemplate going?—I could give the estimate I gave then, I have not got it with me, but it was a very much smaller number than we now contemplate going to.

2311. Could you tell how many less?—Certainly, 300 or 400 less.

2312. You have told the Committee that since the time at which you made that estimate, which was in July 1866, you have discovered that the companies have been doing better?—The estimate, though made in July 1866, was based on their trade up to the end of 1865 only.

2313. You communicated with Mr. Anderson, who is a gentleman at the Exchequer, and Audit Department?—Yes.

2314. That was as recently as February 1868?—Yes.

2315. Immediately before the Bill came into Parliament?—Yes.

2316. Did you not then continue the same estimate you had formed in July 1866, namely, 2,400,000 *l.*?—I continued to make the estimate on precisely the same basis as before.

2317. You did not assume at that time, that there had been any increase between July 1866, and February 1868, that would justify you in putting the subject before the Audit Department of the Government at a higher figure than you had done in July 1866?—I took, as before, the very narrowest view of the subject that an accountant could, I allowed nothing whatever for what I may call the sentimental considerations of the case, that is, the prospective profits, and the compulsory sale.

2318. Do you call 3,500,000 *l.* a sentimental consideration?—The difference is not 3,500,000 *l.*

2319. It is the difference between the 2,400,000 *l.* of February last, and the 6,000,000 *l.* of to-day?—No.

2320. Was that letter of Mr. Anderson's written to the Government with your knowledge and assent?—Undoubtedly.

2321. Listen to this, written in February last. "Sir,—In compliance with your request, I have placed myself in communication with Mr. Scudamore, Assistant Secretary of the Post Office, with a view to the verification of certain financial statements contained in his supplementary report to the Postmaster General on the subject of the transfer of the control and management of the electric telegraphs of the United Kingdom to the Post Office. Mr. Scudamore has produced to me the published reports of the several Telegraph Companies, and copies of the returns made by them to the Board of Trade, and by these I have examined the statements set forth in his report, and I believe the same to be correct. With respect to the mode of paying the shareholders for their property, it will probably be considered right that they should be paid off at once in full." Had that your concurrence?—Yes.

2322. "And that the Government should raise the funds required for that purpose by borrowing in either of the following modes: 1st. The money may be raised by Exchequer Bills or bonds, to be sold in the ordinary way. 2nd. The money required from time to time may be supplied out of savings banks funds, giving in exchange either the securities above mentioned, or an annuity for a term of years certain. The latter appears to me to be the preferable mode. It is estimated that the funds will be required as follows: in 1869, 1,000,000 *l.*; in 1870, 2,000,000 *l.*; total, 3,000,000 *l.* Assuming that the savings banks might supply these sums out of their current surplus receipts, or, if necessary, by aid from their invested funds, an annuity for a term of years certain would be a desirable mode of repayment. The Consolidated Fund would then receive the whole surplus of the annual revenue from telegraphs, and would bear the full charge for the payment of the annuity. The estimated surplus of revenue to be immediately available for replacing capital is estimated at about 180,000 *l.* a year, but there can be little doubt that the increased facilities for telegraphic communication proposed by the scheme will lead to a progressive increase of this surplus; but, taking an average surplus of 150,000 *l.* a year only, the debt of 3,000,000 *l.*, which is a maximum estimate not likely to be called for, would be extinguished," and so on. So that in February you did not, in your communications

nications with Mr. Anderson, assume that there would be any excess over 2,500,000 *l.* ?—No, I do not say that.

2323. Did you allow Mr. Anderson to represent to the Government that the two-and-a-half millions would not be exceeded ?—No, and he did not represent that; he represented that 3,000,000 *l.* was the maximum amount.

2324. Did you give any idea at that time that your estimate of 2,500,000 *l.* was to be exceeded ?—Yes, we made our calculation upon the then market value of the shares.

2325. Did the Government know in February that your estimate had been exceeded by 500,000 *l.* ?—They knew that if we had to pay the market value of the shares at that time, we should have to pay more than two-and-a-half millions.

2326. Do you mean that the Chancellor of the Exchequer knew when he introduced the Bill that your estimate was 3,000,000 *l.* ?—Yes.

2327. Was 3,000,000 *l.* the amount which the Chancellor of the Exchequer was induced by you to suppose was the amount which the public would have to pay ?—The Chancellor of the Exchequer knew that that calculation was made on the market price of the shares of the four Telegraph Companies; he did not know then, nor did I know, that other properties would have to be bought; the property represented by that 3,000,000 *l.* is not the property represented by the 6,000,000 *l.*

2328. When this Bill was discussed, and was sent to this Committee, you had not seen any of those agreements between the Railway Companies and the Telegraph Companies ?—I had not seen them, but I had information as to their purport.

2329. Had you seen them so as to inform yourself of the financial position in which you would be placed with the Railway Companies ?—I knew what were the crucial points of the agreements, because I had been informed of them by the Railway Companies themselves.

2330. When the Bill was read a second time in the House of Commons, had you knowledge of the contents of the terms of the agreement between the Telegraph Companies and the Railway Companies, which enabled you to form any judgment financially as to what you might ultimately have to pay in respect of the Railway Companies ?—No, I had not.

2331. Did you agree with the Telegraph Companies till after this Bill was sent to the Select Committee ?—No.

2332. At the time this Bill was sent to this Committee you had petitions against you, had you not, from 25 or 30 different interests ?—Yes, quite that.

2333. Since that time, have you, with the exception of the interest which Mr. Merewether now represents, bought up every interest, or contracted to buy up every interest, which was represented by those petitioners ?—Yes, subject to arbitration and the approval of the Committee.

2334. They had largely, upon the face of their petitions, controverted the views you have been expressing to this Committee ?—They had endeavoured to do so.

2335. They had in fact ?—They had endeavoured to put forward a case against me. I do not say it was a good case.

2336. In direct opposition to the information you have been supplying to the Committee ?—Undoubtedly.

2337. The Electric Telegraph Company was the company most largely interested, was it not ?—Yes.

2338. That company had put forth its views controverting in detail what you have been stating to the Committee in the course of your examination ? —Attempting to controvert it.

2339. By your arrangements, since the time at which this Bill was submitted to this Select Committee to inquire into, you have in truth shut the mouths of all these parties ?—They are perfectly welcome to speak; I am not shutting their mouths.

2340. Do you propose to call them ?—No, but they are here to be called.

2341. You do not propose to call them. This is the fact, is it not, that this Bill was sent to the Select Committee, with special instructions to make inquiries into various matters raised by petitions from 25 to 30 different interests, and you have, since that time, subsidised every interest that could give any information to this Committee; is not that the fact ?—Not quite.

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2342. Where is it not the fact, if you have agreed with every one of them?—The Bill was sent to the Committee, one of the subjects of reference being with regard to the interests of the various opposing parties; therefore, we considered it was quite competent to us, studying the interests of those opposing parties, to satisfy them while the Bill was before the Committee.

2343. Was not the Preamble a matter sent to this Committee?—Undoubtedly.

2344. Is not your Preamble expressly controverted by the pamphlet published by the Electric Telegraph Company?—It is attempted to be controverted.

2345. By statements in direct opposition to those you have been making to the Committee?—They are not in direct opposition, because they do not touch the same points.

2346. Do they purport to be in direct opposition?—Undoubtedly.

2347. Am I to understand that, having increased your estimate now from two and a half millions, at which it stood in February, when the Bill was first introduced, you object to give to the Committee the details upon which you have now raised it to 6,000,000 *l.*?—I do.

2348. Will you undertake to say that 6,000,000 *l.* will be enough?—I believe 6,000,000 *l* will be the outside amount.

2349. Will you undertake to say that 6,000,000 *l.* will cover all that will be wanted?—I believe it will.

2350. Will you undertake to say that it will?—I believe so.

2351. Will you undertake to say that it will not cost 7,000,000 *l.*?—I believe it will not cost 7,000,000 *l.*

2352. Will you undertake to say it will not cost 7,000,000 *l.*?—I cannot go any closer.

2353. Will you undertake to say that it will not cost 8,000,000 *l.*?—What will be the effect of my giving an undertaking?

2354. Will you undertake to say that with the amount you have contracted to pay to these different parties, the Railway, the Telegraph, and the Submarine Companies, 8,000,000 *l.* will cover the amount you will have to pay?—Having said that, in my judgment, 6,000,000 *l.* will cover it, *à fortiori*, I believe 8,000,000 *l.* will cover it.

2355. You say that you had not agreed for the purchase of the telegraph at the time this Bill came to this Committee?—No.

2356. And you have also told us that you were not aware of the contents of the agreements between the Railway Companies and the Telegraph Companies?—I said I had not seen the agreements, but I knew substantially the purport of them.

2357. Do you mean to say that you substantially knew the fact when you put the telegraphs at 20 years' purchase, that they had only short leasehold terms with the Railway Companies?—I knew some of them had short terms. I knew that the Telegraph Company had only about seven years with the London and North Western Railway Company.

2358. In other cases there are shorter terms, are there not?—In some cases there are shorter terms.

2359. Notwithstanding your knowledge that in the case of the London and North Western the term was seven years, and that in other cases there were shorter terms, you consented to give 20 years' purchase upon about 15 *l.*, did you not?—No.

2360. As I read your agreement you have agreed to give 20 years' purchase upon the nett receipts, that is the gross receipts, less working expenses?—I do not know precisely their nett earnings at this moment.

2361. Close upon 15 per cent?—Take it so. I do not know that it is so, and I do not know that the nett earnings, as shown by the accounts, are really the nett profits. That is a question for arbitration.

2362. You have not agreed to buy them upon the amount of their dividend?—No.

2363. You know that the Electric Telegraph Company pay 10 per cent.?—Yes.

2364. And by its Act it cannot pay more?—Yes.

2365. You have agreed, have you not, to buy the Electric Telegraph Company upon

upon the amount of its present earnings; that is, gross receipts, less working expenses?—Less fair working expenses.

2366. Does not their account show that that is as nearly 15 per cent. as possible?—Probably it is so; I am not quite sure.

2367. So that would give us for the Electric Telegraph Company itself 3,200,000 *l.*?—I cannot undertake to give any information as to any items in the estimate.

2368. You told us that you had gone through their accounts; having gone through their accounts, do not you know that they show that they have a capital of 1,200,000 *l.*?—I wish to answer every question you put to me; but the effect of the examination would be this: you would gradually get item after item from me, till there only remained the matter to be left to arbitration.

2369. Do you know that upon the agreement now before the Committee, which was put in as having been entered into with the Electric Telegraph Company, the purchase money will amount to 3,200,000 *l.*?

The *Chairman* objected to this question being put.

The Committee, after deliberation, decided that the question should not be put.

Mr. *Leeman* stated that he would not proceed further with his examination of Mr. Scudamore till all the agreements were in.

2370. Mr. *Goschen.*] Have you at all gone into the subject of the cost of working telegraphs in France?—I have not.

2371. Do you think we shall be able to do it as cheaply in England as in France?—I am unable to answer the question, as I have not any accurate information with regard to the cost in France.

2372. As a public officer, are you aware whether a single department of the Government, either the Army or the Navy, or any other department, is able to do its work as cheaply in this country as in France?—I do not know.

2373. Do you see any facilities we have in England enabling you to work telegraphs cheaper than they do in France?—I am quite unable to answer the question.

2374. As regards receipts; you have referred continually to the results in foreign countries, I thought you might have considered the other side of the account?—I have only referred to them as showing that a reduction of rates caused an increase of messages.

2375. You handed in a paper on the 6th of July, showing the cost per mile of wire, the receipts per mile of wire, and the expenditure per mile of wire in certain foreign countries?—Those are some miscellaneous statistics that reached me, and I put them in for what they are worth.

2376. Where did you get them from?—The letters at the commencement of the set of papers were addressed to me by the telegraph administrations abroad; those are the papers in Appendix A. The memorandum drawn up by the Director General of the Belgium Telegraphs in Appendix B was sent by him to Mr. Edwin Chadwick, who gave it to me; the remaining statistics were given to me, or rather were sent to the Chancellor of the Exchequer, through a Member of the House, I believe by an American gentleman, who has been travelling throughout the Continent of Europe inquiring into the statistics of telegraphs, with a view of aiding the progress of a Bill similar to that now before you through the American Congress.

2377. You had confidence in them or you would not have submitted them to the Committee?—He assured me that they were authentic documents.

2378. You handed them in as documents that were to guide the judgment of the Committee?—I handed them in as part of the information that reached me for what they were worth.

2379. Will you turn to page 10; you see there the expenditure per mile of wire; take the case of Belgium; what is the expenditure per mile of wire?—Five pounds nine shillings and threepence.

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2380. Call that for the purposes of calculation 5 *l.* 10 *s.*; that is the cost of working under what you may call the amalgamated system?—Yes.

2381. Have you had the curiosity to compare that expenditure per mile of wire with the expenditure per mile of wire in England?—If you will turn to page 21 of my Report, at the bottom of the page, you will find that I have given for four years the cost per mile of telegraphic wire in the United Kingdom, Switzerland, and Belgium, and you will find that it is less in the United Kingdom than in either Switzerland or Belgium, and the average is also less.

2382. Will you take your own figures of 4 *l.* 10 *s.* and multiply that by 80,500 miles, which is the length of miles of wire in England in 1866, and see how it comes out?—Three hundred and sixty thousand pounds; that is the cost of the whole system, clerks, rents, and everything else; not merely the cost of maintaining and repairing, but the entire cost of the telegraph system. That 4*l.* 10 *s.* is arrived at by dividing the number of miles of wire into the total cost of the Telegraph Companies.

2383. That gives you 360,000 *l.*?—That was in 1868.

2384. Since that you must add, as we agreed yesterday, about 8 per cent?—No; if you take the actual cost of the Telegraph Companies in 1867 you will find that it was only 330,000 *l.*

2385. Then how do you account for that difference?—That for some cause or other they had reduced their working expenses.

2386. How do you arrive at that 330,000 *l.*?—You put that in the published accounts of the companies.

2387. Will you put them in?—The Telegraph Companies have them.

2388. Will you put them in as evidence?

Mr. *Rodwell.*] It is no part of our case. If the Railway Companies had been opposing and raising any discussions between the Promoters and themselves, that might have been evidence; but these published accounts probably will be the basis of the matter that will be brought before the consideration of the arbitrator.

Mr. *Goschen.*] Who is to go into them, as all the opponents have withdrawn?

Mr. *Rodwell.*] That is not for me to say. If there are no opponents, matters in opposition to the Bill can probably only be brought forward by Honourable Members of the Committee.

Mr. *Goschen.*] Then the Promoters of the Bill, being the Government, refuse, I understand, to put in those accounts in justification of the terms to be given.

Mr. *Rodwell.*] Before I assent to that question, I should like more specific information as to the precise accounts to which you refer.

Mr. *Goschen.*] I mean the published accounts of the companies.

Mr. *Rodwell.*] If all that is required on our part is, that they should be handed in, we shall be happy to hand them in; but if you mean that I am to call the secretaries of the Electric Telegraph Companies to give information as to those accounts, that is another question.

Chairman.] You do not consider that they form part of the case of the Promoters?

Mr. *Rodwell.*] Certainly not. I will put in the published accounts *quâ* accounts, but up to the moment of our agreement with these companies they were hostile to us, and it would hardly be the thing for the Promoters to call witnesses in support of the scheme from among those who have been so lately opponents.

Mr. *Goschen.*] Now they are friends.

Mr. *Rodwell.*] They are the best friends now, but *non constat* this Bill is passed, if this Bill is not passed, we revert to our original position of promoters

moters and opponents; these are all the accounts we can get (*handing them in*).

Chairman.] We understand that they are handed in for the information of the Committee, but as forming no part of the case of the Promoters.

Mr. *Rodwell.*] Yes; the Honourable Member for the City of London asked if they could be handed in; I presume he wishes to use them, therefore without comment I put them in.

2389. Mr. *Goschen* (to the *Witness*).] As regards this 330,000 *l.*, which you state is the aggregate expenditure of the companies, have you analysed that expenditure, has that figure been given you by the companies, or have you worked it out from their published accounts?—I added the expenses together myself, this morning.

2390. And the expenses are less now than they were in 1865, notwithstanding the large increase in the business?—80,000 miles, to which the expenditure of 360,000 *l.* applied, would not be the number of miles of wire at the end of 1865. It was 77,440 *l.* at the end of 1865, and you will find that the expenditure on that is 345,000 *l.*

2391. Are you now stating the expenditure and the length of miles of the same year?—Yes; I can tell you one notable reason for the difference between the expense of 1865 and the expense of 1866, and that is the snowstorm which occurred in 1865.

2392. Was that snowstorm charged to capital?—It was charged to revenue.

2393. Mr. *Norwood.*] Are you clear upon that point?—Perfectly clear.

2394. Mr. *Potter.*] In the accounts of the company it was charged to revenue?—Yes.

2395. Would you be able to state the length of mileage of wires now?—I have not the information at this moment; my information as to length of miles of wire, I should say, is obtained from returns made to the Board of Trade by the Telegraph Companies, and none have been made since the date of this last report of mine, at the end of 1866.

2396. *Chairman.*] A return was called for by Mr. Ayrton, I think?—That was miles of wire applicable to railway purposes, if I recollect rightly. The Board of Trade had not completed it quite recently.

2397. Mr. *Goschen.*] You are not aware what the increase in the mileage of wire has been?—I am not.

2398. Should you think it had increased by 10,000?—I should doubt it very much.

2399. The increase has not been rapid?—I think on the face of it, it is not very likely that the increase would be very rapid during the year this question was pending.

2400. This is the report of July 1866, so that it is two years ago?—Yes; but I give it to the end of 1866.

2401. What was it then?—It then was 80,000; that is at page 158.

2402. Does your estimate of 330,000 *l.* include the cost of working the railway messages?—It includes everything that is done by the Telegraph Companies.

2403. Not the cost of working those telegraphs which are not included in your original reports?—Do you mean the South Eastern Company?

2404. Yes?—No, it does not include that.

2405. On the other hand, your messages of 11,200,000 do include that?—No: in both cases those items are excluded. The estimate I gave you yesterday, entirely from the messages of the Telegraph Companies.

2406. *Chairman.*] Let us understand that quite clearly. The estimate you gave us yesterday has no reference to the purchase of what you call the small trades of Railway Companies who transmit telegraphic business for the public?—No reference whatever.

2407. So that, in purchasing those, we should have to add something to each side of the account?—Yes.

2408. That observation applies to the rough estimate of the purchase-money which you gave us this morning?—Yes.

2409. Mr. *Goschen.*] I think your 330,000 *l.* is composed of the charges of the three companies only?—Four.

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2410. The British and Irish Magnetic Telegraph Company?—Yes.

2411. The United Electric Telegraph Company?—Yes.

2412. And the International?—Yes.

2413. What is the fourth?—The London District; that is a small item.

2414. These accounts which have been put in are the accounts of last year?—I believe so; I did not look at them before I gave them to you.

2415. How long has the London and Provincial Telegraph Company been in existence?—It seems to have commenced in 1860.

2416. It is 4,500 *l*, for the half year?—I imagine that those are two half yearly accounts that I have given you.

2417. I make the aggregate expenses of those four companies to be 340,000 *l*., and not 330,000 *l*.?—I think not, I think that it is a little over 330,000 *l*., I call it 331,598 *l*., perhaps you have added in the interest on debentures.

2418. No, I think not, but it is not worth while going into the difference; these are the four companies, but besides that, you have got the South Eastern Railway expenses of working 3,000 miles?—No, I have not, I shall have nothing to do with that.

2419. Do not you buy that?—I buy their trade, but I shall have nothing to do with the working.

2420. They will work it for you?—They will either work it for us, or it will run on parallel lines that we acquire in other ways. You should understand that the South Eastern is not the only means of telegraphic communication with that part of England, we should run over the British and magnetic wires.

2421. You do not calculate that it will cost you anything for working:—Yes, it will cost us something to send messages, undoubtedly.

2422. How much?—It will cost us as much to send a message in that way as in any other way.

2423. Surely there must be added in the cost of this concern, the cost of those 3,000 miles which you have not included?—Yes, if I added the revenue, but I have not added the revenue.

2424. You think that the increase on the revenue side would be quite independent of the traffic of the railways?—Yes.

2425. But I mean the number of messages sent by the South Eastern Railway you have got no idea of?—Yes, I have, I suppose that the South Eastern Company send something like, perhaps, a little over 100,000 messages a year at this moment; I do not know the exact number.

2426. That would be what proportion of your 11,000,000?—It is not included in the 11,000,000 at all.

2427. It is a very small proportion, is it not, of the 11,000,000?—Yes, a mere trifle.

2428. At the same time the length of the wire is very considerable as compared with the wire that you buy?—We do not buy the wire.

2429. Are you going to agree with the South Eastern Company for the wire?—No, their trade is of this kind; they set up their own telegraph for their own purposes; the Telegraph Companies did not construct it for them, they constructed it for their own railway signalling, and, finding that at different times of the day they could utilise the wires by sending messages for the public, they have done so. We shall take those messages away from them, or if they send them they will send them on our account, we paying them some proportion of the messages.

2430. *Chairman.*] Is that provided for in the Bill?—Yes.

2431. And we only purchase of the Railway Companies their public traffic, leaving them to carry messages for their own purposes?—Yes.

2432. Mr. *Goschen.*] Have you made any further inquiry into the matter as to the cost of repairs and maintenance of line and so forth?—I have taken out the maintenance and repairs from the accounts which you have got this morning, and out of the 330,000 *l*., I see that 91,000 *l*. is set down for maintenance and repairs of land lines, that does not include anything for the cables.

2433. Then I think in your maximum, or in your most favourable estimate, you make the working expenditure about 380,000 *l*.?—Yes.

2434. And in your minimum estimate you make the expenditure 291,000 *l*.?—Yes, there being no provision there for increase of business, as no increase of business is taken for granted.

2435. But I think you admitted yesterday that there ought to be an addition

to

to that, because you have not calculated the increase in the business from the cost of sending 6,000,000 telegrams to the cost of sending seven and a half millions?—If I made any addition it would be a very small one indeed.

2436. Do you think that it would be 25,000 *l.*?—That would be a great deal too much.

2437. Then you stand by those calculations, and you think that we may take it from you that you have gone thoroughly into the calculation, and that those estimates will not be exceeded; that is to say, we may rely that it is not likely to be more than 291,000 *l.* at the worst?—Will you allow me to give you one illustration where I think I have been very moderate. I have only taken off from the expenditure of the companies what they think they could save by amalgamation. I have taken nothing into account whatever for what the Post Office can save by the kind of amalgamation that it will effect.

2438. *Chairman.*] How did you get at what the companies think they could save by amalgamation?—The officers of the companies gave me the information. I will value the single item of accounts. The companies have at present, or had in 1866, 6,000,000 telegrams, each of those telegrams representing a payment in cash; it will be obvious to any one that the work of keeping the accounts of those 6,000,000 cash transactions and keeping a check upon them, and seeing that the officers who received the money accounted for it properly, must be a costly one. Taking it at a halfpenny every transaction, which I should think was a very moderate amount indeed, it would be 12,000 *l.* per annum for accounts and check alone. I will undertake to say without the slightest fear that the accounts will not cost us 1,000 *l.*, in addition to what we already spend for accounts. We have from every one of those dots a daily balanced cash account; those accounts are every day carried into the ledgers of the central office, and we know from day to day what each on their accounts owes to us, or we to them; and when we have got a uniform rate and have introduced stamps, all that we shall require for the check on the telegraph receipts will be two or three more entries in each of those daily balanced accounts, and two or three more columns in the ledgers at the central office, and 1,000 *l.* I am confident, is an extremely liberal estimate for that.

2439. Mr. *Goschen.*] I repeat my question, do you stand by that estimate and think it a moderate one, and that it will not cost more than 291,000 *l.*, unless there is an increase of business?—I think not decidedly.

2440. Are you positive of that; we are taking the matter almost exclusively on your evidence, and I should like to know whether you have got a strong opinion upon it?—I have a very strong opinion.

2441. You have a strong opinion that that amount will not be exceeded, and that you can go up to the number of 11,600,000 messages, and carry out your views as regards the increase of business without exceeding 379,000 *l.*?—Yes; you may take it decidedly as my opinion, that the more business we get the less in proportion will be our expense.

2442. You allow here for a very large increase; in fact, you allow for an increase of 50 per cent. of business?—Yes.

2443. And 30 per cent. increase in cost?—Thirty-three per cent., I think, I put as the increase in cost for 50 per cent. increase of business, having found that 105 per cent. increased business only cost the Electric Company 33 per cent. increase of cost.

2444. What are your views with regard to the private telegraphs?—We have come to an arrangement with the Universal Private Telegraph Company for the acquisition of their trade; that is one of the small trades that we propose to purchase, but which is not included in the amount of revenue.

2445. *Chairman.*] Do you mean their public traffic?—Public and private.

2446. Mr. *Goschen.*] There are Dock Companies with telegraphs, are there not?—We do not propose to interfere with the Dock Companies unless they wish it. We will give them way-leaves over our posts if it is convenient to them.

2447. Are the Dock Companies to make arrangements to hook on a wire, as they do with the companies?—Yes.

2448. Is that carried on to any great extent?—Yes; I think it is not confined to Dock Companies; there are Lighthouse Commissioners, and so forth, that have the same privileges, and the coal trade also.

2449. Will the Government give facilities for the same kind of thing?—Yes, certainly.

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2450. Have you got a clause in the Bill which provides for that?—I can hardly say whether the Bill does provide for it or not.

Mr. *Rodwell* was heard to state that he doubted whether anything of that sort was necessary under the powers which were taken in the Bill, but if so it should be put in.

The *Chairman* stated that probably some provision would be required to enable the Postmaster General to make arrangements with private persons.

2451. Mr. *Goschen.*] Your attention has been directed to that as being necessary to carry out the object of this Bill?—Yes; another circumstance of the same kind has come to my knowledge since we have been in this room. I have to-day found that some merchants commute their payments for messages, and they pay so much a year instead of paying per message, and I presume that there would be no objection to a system of that sort being continued.

2452. And you would give very elastic powers to the Postmaster General?—Yes; but at the same time we should be prepared to lay all special agreements upon the table of the House of Commons.

2453. Would you lay before the House such agreements as agreements with every merchant and coal miner and coal company?—I see no reason why they should not be scheduled once a Session.

2454. That would be to guard against what?—To guard against the imputation of favouritism, for our protection, and not for the protection of the public.

2455. It is to meet the argument that a political department ought not to be trusted with that kind of discretion?—Yes, it is intended to meet that.

2456. Do you think that scheduling would be sufficient?—I think that putting in a return of the special agreements every Session would enable the House to check us if we had done any wrong, and would enable us to say to objectors that the House of Commons will see the particulars of every agreement as soon as it is made.

2457. That would be your plan of remedying the difficulty of entrusting the Postmaster General with the discretion of making pecuniary agreements with a various number of private parties?—That would be a very small discretion compared with that which the Postmaster General already has. He makes arrangements with all the Railway Companies, subject to the approval of the Treasury, and none of those contracts go before the House of Commons; it is only the packet contracts that go before the House of Commons.

2458. Perhaps you are of opinion that it would be advisable that the arrangements with the Railway Companies should go before the House of Commons?—I hardly know that I have an opinion to give upon that. I certainly have no objection as far as the Post Office is concerned; the more the public overlook us the better we like it.

2459. Are there any Acts in abeyance enabling Telegraph Companies to construct lines which may be brought up against you when the Bill is passed?—I do not think there are. There were two Acts; one, I think, Bonelli's Private Telegraph Act, and another the Economic, but I believe they are altogether extinct.

2460. Has your attention been directed to it, to inquire whether every power that is given by Parliament has expired?—I have inquired, and so far as I know there is nothing that can come up against it.

2461. Do you remember whether there were any?—There was one called the Globe, but I think all their powers have expired.

2462. Mr. *Rodwell.*] The united companies bought Bonelli's business, I think?—Yes, they did; it is absorbed in the united companies, and I think the Economic has nothing to buy. I question if it had a post.

2463. Mr. *Goschen.*] Would you consider yourself bound to purchase if they were to press it?—No, they ought to have come before this Committee.

2464. With regard to the question of legal monopoly, have you given your attention to that?—Yes; and my opinion still is that the Post Office does not want a legal monopoly. They need not fear competition, even in lucrative districts. I should fear it much less in the case of the telegraph than in the case of letters. A Circular Delivery Company could be started with next to no capital at all. A man who could acquire an office and provide himself with the wages

for

for a few weeks of men to carry out circulars might start a Circular Delivery Company, but in order to start a telegraph, even in a limited scale in a large town, a certain amount of capital would be required; and I do not believe that when the Post Office has once got to work any capital would be forthcoming for such a purpose.

2465. I think you have not given any evidence upon this point, have you?—No.

2466. The instruction is for the Committee to inquire into the question of a legal monopoly, are you aware of that?—Yes.

2467. But do you not think it should be a legal monopoly for the protection of the Treasury?—I do not.

2468. Do not you think that companies might start almost with the avowed intention of claiming to be bought off?—I do not believe that they would ever get beyond the prospectus. I may say that we have no monopoly of the money-order business. There is now a prospectus for a money-order company, but it will never be anything more than a prospectus. It has got a secretary, a broker, and, of course, a solicitor, and there it ends.

2469. Will you tell me your objections to its being a legal monopoly?—I stated them in my first day's evidence.

2470. You thought that the public would have more confidence if it were not a monopoly?—Yes, I think that the public would always be able to say to themselves, "The Post Office has got no monopoly, but if it does not do its work well, it is in our power, at all events, to get up something." And, again, if we had a legal monopoly, we should shut every door but one, that is, our own door, to all inventors, and every inventor then, even the gentleman who proposes to carry messages without any wires at all, would be perpetually coming to us, and saying, "You must try our system, because you are the only people who can try it."

2471. On the other hand, the stimulus would be removed, to a certain extent, for entertaining discoveries, or, if you had no legal monopoly, you would have the answer ready for everybody, "Go and try elsewhere"?—You may be quite sure that we should always be ready to try any good invention, because we should always save money by doing it.

2472. You do not think that the Post Office would be so behindhand as other departments are sometimes said to be in trying inventions?—I do not know how far other departments have been behindhand; I do not think that we have ever been behindhand when we have had a chance of doing anything useful.

2473. In fact, you do not wish to have a legal monopoly; as I understand you, it does not practically decrease your security, but it gives the public a kind of idea that you have got a responsibility which you practically will not have?—Yes.

2474. So that it would delude the public to a certain extent?—No, I would not go to the extent of saying that.

2475. They think that they have the protection of competition, when you know well that competition is impossible?—Yes, I know competition to be impossible.

2476. So that you will have in this way the advantage of monopoly without its responsibility?—We think that there would be another disadvantage in a legal monopoly; if we had it and anybody attempted to infringe it, we should be bound by law to prosecute, and I think that that is an extremely disagreeable duty to be imposed upon a public department, and one that I should be very sorry to have the responsibility of. I may say that we did not prosecute the Circular Delivery Company because we thought that they could get 5 *s.* out of us. We were urged to do so by the public more than once, to whom, I believe, they were really a nuisance.

2477. *Chairman.*] With regard to a monopoly, the fact of there being no legal monopoly will tend to keep the Post Office up to its work, will it not?—I think it will.

2478. Supposing that there was a manifest improvement in the mode of transmitting telegraph messages, and the Post Office would not adopt such an improvement as would greatly decrease the cost of sending messages, it would then be open to any private person or company to start such a thing if the Post Office was dogged, and refused?—Yes.

2479. And so far, there being no legal monopoly is the advantage to the public?—Yes.

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—Yes. Let me put it in this way: If we were now to raise our charge for money orders, I think that this money-order company would get beyond a prospectus. I think then there would be some directors' names attached to it.

2480. Mr. *Goschen.*] You would get as far as the directors, but you do not know whether you would get so far as the cash?—I do not know. When you get directors you get cash as a general rule.

2481. Mr. *Norwood.*] I believe that you have analysed those accounts which have just been handed in to the Committee. Will you tell me what is the amount which you have extracted from those accounts for the maintenance of the electric telegraph system during the year ending the 31st of December 1867?—I think it is 91,000 *l.*; it was only roughly taken out this morning. I make it 91,000 *l.* 3 *s.* 4 *d.*

2482. I am talking of the yearly account ending December 1867?—Yes, I make it 91,000 *l.* for maintenance and repairs.

2483. What was the expenditure of the Electric Telegraph Company alone?—That is 56,700 *l.*

2484. Now the Magnetic?—The Magnetic is 24,900 *l.*

2485. The United Kingdom?—£. 9,048.

2486. The London and Provincial?—£. 433.

2487. What is the total?—£. 91,113.

2488. Can you tell me what was the maintenance of the submarine wires of the Electric Telegraph Company?—I have not got that. I have not taken it out. I will get it from the accounts, if you wish. In the half year ending the 30th of June 1867, the cost of repairing the submarine cable is stated to be 1,985 *l.* 15 *s.* 10 *d.*, and in the following half year it is stated to be 3,229 *l.* 1 *s.* 7 *d.*, which makes a total of 5,214 *l.* 17 *s.* 5 *d.*

2489. Then you will find the Magnetic; there is one account, the yearly account, I think, for that company?—It is set down at 2,674 *l.* 0 *s.* 10 *d.*

2490. In round numbers, the total amount paid for maintenance by those companies would be about 100,000 *l.*?—Yes.

2491. The Electric and International accounts which you have before you, I think, show that after dividing 10 per cent. per annum there was a surplus upon the year's working of 36,613 *l.* 9 *s.* 10 *d.*?—Yes.

2492. In addition to that there were the former surpluses, amounting to about 106,000 *l.*?—Yes, there were.

2493. Then, in point of fact, those figures would show that the Electric and International Company made a profit, according to their accounts, of about 14 per cent.?—I assume that those accounts show the fair profit; that is the inference I draw.

2494. I want to ask you this: the approximate estimate, which you stated at the commencement of to-day's examination, as to the total amount of capital required to enable the Government to become possessors of this system, will not, in your opinion, exceed 6,000,000 *l.*?—I think so, decidedly.

2495. Is that your deliberate opinion?—Yes, that is my deliberate opinion.

2496. It is formed upon data?—To a certain extent it is formed upon data; at all events upon facts which carry conviction to my mind.

2497. We take it from you as an important official of the Government and a gentleman of considerable reputation, that that is the calculation which you make upon your reputation?—Yes.

2498. You deliberately state that that is your judgment, not hastily formed, but deliberately formed, and which you adhere to?—Yes, I do.

2499. Sir *Frederick Heygate.*] It may be a good deal less?—Yes, it may be less; I put that as the outside.

2500. Mr. *Norwood.*] We are obliged to take your *ipse dixit* to a certain extent, and I think it is a fair question to put to you, that the country will look to you if you get possession of the telegraphs, to verify your own prophesy?—Yes, of course; I say that at the risk of my own official character.

2501. With regard to a question put to you by the Right Honourable Member for the City of London, have you ever made anything like an investigation as to the comparative cost of working the Post Office system in England and in France?—I believe that in France the Post Office is not self-supporting; I am speaking now with reserve; I am not quite sure, but I believe that it is not self-supporting.

2502. That is scarcely an answer to my question; I want to know this, have you

you reason to know whether the Post Office administration is really more economically managed in England than in France, or *vice versâ*?—I do not know.

2503. Of course we know that our Army and Navy are expensively worked in England, but cannot you say that the reverse is the case with the Post Office?—I have never yet in the course of 28 years heard the Post Office charged with extravagance of management.

2504. At any rate you cannot give me an answer as to the comparative management?—No, I cannot.

2505. We had evidence given the other day by a very intelligent gentleman, Mr. Allen, I think, and he told us that, in his opinion, the system of charging per message of 20 words, and throwing in the address, is not a good and sound one, and that he prefers charging 6 *d.* for 15 words including the address; what is your deliberate judgment upon that?—I think it is quite probable that, in the course of years, his opinion will be found to be correct, but I would rather begin with the 1 *s.* rate.

2506. That is your deliberate opinion?—It is; I was very much struck by what he said, and on thinking it over since, I am inclined to believe that there was very great force in the remarks which he made, but it would be more prudent to begin with a 1 *s.* rate. It would be necessary to give the address, because that is practically given at present, and we could not withdraw it from the public.

2507. He only proposed to give 15 words, including the address?—That was 6 *d.*, and eventually we should do the like, I have no doubt; but if the rate were reduced, I should not exclude the address.

2508. You have a strong objection to starting with less than 1 *s.*?—Yes, I should propose to start with 1 *s.*; I should like to be safe at present; I should be very much surprised if we did not come to a sixpenny rate in a few years.

2509. Of course the Post Office contemplate a still greater extension of telegraphic communication to extreme points and thinly populated districts as soon as the plan has proved a success?—We open fresh money-order offices each year at the rate of more than 200 a year.

2510. And you will carry your telegraphs on in the same ratio?—Yes, we should make use of the money-order offices, and they would be worked practically in those offices in much the same way as the money orders, because we have a perfect system of account in every money-order office, into which the telegraph account would fall; when we get beyond that we have no direct account between the receiving offices and the head offices.

2511. *Chairman.*] Have you a higher class of officials in the money-order offices?—Yes, we pay them better, and get a better class of men.

2512. Sir *Frederick Heygate.*] If there were private contributions in aid of a sub-post office being made a telegraph office, would that be admissible?—You mean upon the system of guaranteed posts.

2513. I merely mean that there may be sub-post offices at a considerable distance from the money-order office, but close to a railway station to which the telegraph is extended; if you extended the telegraphic communication to that sub-post office, probably it would not pay, but it might be worth the while of the residents in the neighbourhood to subscribe a certain sum in addition?—That would be quite admissible, but I should say that of late years we have very much set our face against anything of the kind; we have endeavoured to give accommodation without any guarantee; we got rather ashamed at last of asking the inhabitants of a district to guarantee us a loss of 5 *l.* 6 *s.* 8 *d.* a year.

2514. How would you do in a place where there was simply a sub-post office in immediate contiguity to a small railway station, which small railway station now has telegraphic advantages?—There the railway can transmit messages on their own account, we paying a proportion, and the inhabitants would have the same advantages as before; we do not want to break up or destroy that. It is part of our agreement with the railways for the public advantage; they could have all the advantages which they now get at the railway stations, we giving them more advantages, which they do not now get at the railway stations.

2515. You said the other day that there was a loss by the transmisson of every letter between England and Ireland?—Yes.

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2516. How long has that been the case?—Ever since the present packets were established, and that, I think, is seven or eight years ago.

2517. Does that loss arise principally from the great expense of the present packets?—Yes; the contract is 80,000 *l.* a year, and the correspondence cannot bear it *per se*.

2518. Is not the existence of those packets principally for imperial purposes?—They are of national importance; it is part of my case; I do not charge it against them.

2519. Can you tell me whether the loss upon the Irish correspondence is a diminishing loss?—Unquestionably.

2520. Have you any particulars which you can give me of that?—The Irish correspondence increases every year, and of course diminishes the expense; the Irish correspondence, that is letters delivered in Ireland, in the year 1865 were 56,000,000 in number, and in the year 1867, the population having considerably declined, they were 59,000,000 in number.

2521. Can you tell me what the supposed loss against the Irish Post Office is?—I am not prepared to say that the Irish Post Office as a whole is a loss; when I spoke of loss, it was with reference to the letters passing between England and Ireland.

2522. Then, you do not mean to say that there is a loss upon the Irish letters?—No, I meant on every Irish letter going between England and Ireland.

2523. But is not that loss just as much likely to happen in the case of the mountainous districts of Scotland or Wales?—I should not think that we carried a letter to Wick for a penny or anything like it.

2524. Nor to any of the mountainous parts of Wales?—No.

2525. Nor to the agricultural districts of England?—Yes, I fancy that we do mostly there.

2526. Say the parts of Norfolk that are thinly inhabited?—I think we carry for a penny there.

2527. You think that in no part of England is there a loss?—Not much loss if any, or very rarely so, but up the Highlands and in Wales there must be a considerable loss upon every letter.

2528. In fact this loss arises from the large portion of mountainous and thinly inhabited country existing in Ireland?—Yes.

2529. Mr. *Graham.*] Have you arranged with the Universal Private Telegraph Company?—Yes.

2530. Are you aware that they afford facilities to private individuals and manufacturers to have telegraphs?—Yes, and we should do so as well.

2531. There would be no diminution of those facilities?—No.

2532. So that any private individual along a line of railway would be able to obtain permission from you to connect a wire with his own manufactory or house?—Undoubtedly, we should continue to carry on precisely the trade that they do.

2533. You would be able to carry on the trade much cheaper than they do, having your wires everywhere, whilst they have not wires in every direction?—Yes; and we should also be able to carry it on much cheaper for this reason. They employ Professor Wheatstone's A B C instrument, and the price is rather high, because, of course, they only have a small number of them; but we know that, taking the instruments in the quantities in which we should want them, we should get them at a considerably lower rate.

2534. You would still be able to make use of that instrument?—Undoubtedly.

2535. Mr. *Norwood.*] What is your principle of giving a money-order office in a district?—When we think that 12 orders a week, or two a day, will be issued, we give it without any question, because we know that it will pay.

2536. And would you give a telegraph at the same time?—We should give a telegraph at the same time hereafter.

2537. Sir *Frederick Heygate.*] How do you know that there is a likelihood of two money orders a day being sent from a certain place?—We send to the nearest money-order office, asking how many money orders are taken out by the people in the district about to be affected, and we make them keep a return for four weeks, and, when we find that 12 a week are being issued, we grant them a money-order office without a question; but we constantly depart from that rule when there are some special circumstances that divide the people of the district from

from the nearest money-order office; as, for instance, where there is a hill or a river with a ferry, for which they have to pay, or any other kind of obstacle; then we assume that that is a check to them, and that they would be taking more money orders but for those obstacles, and we grant a money-order office for a smaller number of orders.

2538. Where there are two or three towns near such a district, do you direct each of those towns to keep an account?—Yes.

2539. How are you able to ascertain where the people come from who take out those orders?—They always give their addresses.

2540. Mr. *Potter*.] You stated that you were satisfied with a practical monopoly?—Yes.

2541. Would not that practical monopoly be much safer with a sixpenny rate than a 1*s*. rate?—Of course, the lower the Government charge is, the less fear there is of competition.

2542. Does not the whole tenor of your evidence lead the Committee to the conclusion that coming down to 6*d*. at once would be a safer step than the 1*s*. one?—I am afraid that the Committee would think me too bold and sanguine a person, if I answered that question in the affirmative; I would rather be cautious.

2543. But if it were left for you to determine, would you not at once come to a 6*d*. rate?—I must not say that.

2544. Your private opinion would be in favour of a sixpenny rate?—I will go so far as to say this, that if in three or four years' time there has been a large increase of business, yet not so much increase as I have anticipated from the reduction of rate, I should then feel certain that our only fault was in not having made a sufficient reduction, and should be desirous to recommend that we should come down to 6*d*.

2545. Supposing there were a loss for the first year or two, and that the tax-payers had to pay that loss, do not you think that the general public would be better satisfied if that loss resulted from your coming down to sixpence at once?—Possibly they might, but after all that has taken place before the Committee, I should not like to see a loss in either the first or the second or the third year at all. I want to see it self supporting from the first.

2546. Would you yourself anticipate any loss in the second year from the six-penny telegraph system?—I have made so many promises that I must not make any more.

2547. You have spoken rather in favour of Mr. Allen's suggestion of 15 words?—Yes, I think there is great sense in it.

2548. Would there be any great difference in the cost between 15 and 20 words in a telegram between London and Aberdeen?—It would be imperceptible.

2549. Would it not be better to tempt a customer with the extra five words than to restrict him to 15?—Possibly it might, but still I do not know about that. To the great mass of people 15 or even 10 words would be enough, for there are really a great number of messages which could be comprised in four or five words; for example, "I shall not be home to dinner;" "I will bring down some fish;" "You can come and meet me at four," and so forth. There would be millions of messages of that kind, and I do not know why we should give more words than the people wanted.

2550. Still you have expressed yourself very strongly in favour of having only one universal charge?—Yes.

2551. Provided you saved nothing by restricting it to 15, what is the value of making a difference of charge?—Are you speaking of the difference between a 6*d*. rate for 20 words, and a 1*s*. rate for 20 words?

2552. I am speaking of the difference between the cost of 15 and 20 words' messages?—But you are proposing to have a 6*d*. rate for 20 words. I should like to have something for the extra words beyond 15; I think 15 words would be ample for the public for 6*d*., and we ought to have something beyond; say an additional 1*d*.

2553. Do you think that the public would be satisfied if you restricted the number of words after the standard of 20 words has been established throughout the country?—I think they would; I think it would make a very perceptible

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change for their good to charge them 1 *s.* for 20 words, and 6 *d.* for 15; a very taking alteration indeed it would be.

2554. *Chairman.*] Are all the agreements ready now?—I am afraid that they are not all ready.

[The Witness withdrew.

Edward B. Bright, Esquire, called in; and Examined.

E. B. Bright, Esq.

2555. Mr. *Goschen.*] You are the Secretary of the British and Irish Magnetic Telegraph Company?—Yes.

2556. Can you give the Committee any general information as to what sum in telegraphic business ought to be estimated as necessary for the repairs of the lines; what percentage of the cost of the line?—We have not worked it out as a percentage upon the cost of the lines, but we have worked it out as an annual charge per mile.

2557. Do those annual charges vary much?—That depends upon the nature of the construction. In towns where there is a greater amount of waste and depreciation, the annual charge is higher than in the country where there is very little waste.

2558. The town lines depreciate more rapidly than the county lines?—Yes.

2559. How long has your company been established?—The present company has been established since 1857, but it was formed by the amalgamation of two companies established in 1851 and 1852.

2560. Do you happen to know whether the amount that has annually been spent upon the replacing and maintenance of lines and instruments, has been a fairly permanent sum?—It has increased as the lines have extended, but unless the lines were kept well up to a good condition the traffic would fall off at once.

2561. Could you tell me how often, for instance, the posts have to be replaced; how long are posts considered to last?—From 12 to 13 years.

2562. And they would require replacing about every 12 or 13 years?—Yes, that part of the line consisting of posts.

2563. How often do the wires require replacing?—The posts, I should mention, would deteriorate somewhat more rapidly in certain positions, and less rapidly in others, but that is the average. The wires in towns require renewal once in four or five years. In the country in some cases where we are not subject to the action of smoke, the wires exhibit no practical depreciation from the time they were first erected in 1851 and 1852.

2564. So that there is an enormous difference between the amount of deterioration of wires in towns and in the country?—Yes, it arises in this way. The smoke attacks the galvanising of the zinc on the wire, and forms what was an oxide of zinc into a sulphate of zinc; oxide of zinc is insoluble to the action of water, and sulphate of zinc is soluble, so that in towns the zinc very soon passes away.

2565. Will you be able to state what portion of your length of wires is in towns, and what in the country?—From some returns which have not been gone very closely into with regard to the question as to the division between town and country, I may say that we have about 350 miles in round figures in towns out of a total of about 19,000 miles.

2566. So that it is a very small proportion?—A very small proportion.

2567. That is 19,000 miles of wire?—Yes.

2568. And the bulk, I may say, out of the 18,500 miles practically shows no signs of deterioration since they were put in with the posts?—I will not say that, because in many cases there may be a certain amount of smoke in the atmosphere in the neighbourhood of towns, or where there are different manufactories carried on in the neighbourhood of the wires.

2569. But

2569. But could you state an average as regards the replacement of wires, as you were able to state an average as regards the replacement of posts?—I can give you a general average of the replacement of the total line. Our total expenditure of late has been such an average as would practically replace the whole of our lines in from 11 to 12 years; but I should mention that that expense partly consists of the supervision also of the line.

2570. You add to the cost of maintaining the line in order, the cost of the supervision; does that include the replacing of the instruments?—It includes the instruments.

2571. Do the instruments frequently require replacing?—They are continually repaired and replaced in part.

2572. Could you state to the Committee what proportion of outlay there has been upon the two items of instruments, on the one hand, and posts and wires, on the other?—I could not give you that separately; I could by reference to our statistics.

2573. Are there statistics upon the subject which are in a published form, and which you could favour the Committee with?—No.

2574. Perhaps you would not have any objection to put them in on Monday, if you could furnish us with those statistics?—I do not think that there would be any objection whatever to the company's furnishing those points, provided it would not affect them in any question of arbitration.

2575. We only want the facts. I do not propose to examine you upon anything connected with the value of what you have got, because that would be prejudicing your case, but any facts which you could put before the Committee we should be glad to have; any published figures?—The company have no possible objection to give you the facts.

2576. One fact, for instance, could be worked out by a careful examination of your previous balance sheets, namely, how much has been spent on posts and wires, and how much on instruments and so forth. I presume that can be easily given?—We do not give those details in our balance sheets.

2577. But in the statistics which you have mentioned, they are included, are they not?—Yes.

2578. Has the aggregate cost of working your lines increased lately, or decreased?—The aggregate cost of working has gradually increased, as we have extended and employed more staff.

2579. Can you state whether the item for the engineering staff, and the item for the maintenance of line and instruments, is fairly a permanent charge on the average of years; do the figures vary much from year to year?—I can give the figures for the last three years. In 1865, 24,946 *l.* was spent in the maintenance of the lines and supervision; in 1866, 25,210 *l.*; and in 1867, 24,910 *l.*

2580. Mr. *Norwood.*] Exclusive of submarine cables?—Yes, exclusive of submarine cables; on the land lines only.

2581. Mr. *Goschen.*] Could you give the total of your ordinary working charges for the last three years in the same way?—The accounts are in the room.

2582. Have you got any other items which you can give me in the same way for three years, as you have done for that item?—It is simply adding the items from the accounts. I have not the accounts on the table, but they are in the room.

2583. Have you not drawn those other accounts out?—No, I have not; they shall be handed in.

2584. What cables have you got belonging to your system, to Ireland?—Two to Ireland.

2585. How long have they been down?—One was laid in 1853, and the other in 1854.

2586. Are they the same cables now that were sunk at first, or have they been changed?—They have been repaired and partly renewed from time to time.

2587. Do you happen to remember the cost of them within a few thousand pounds?—Each cable cost 13,000 *l.*, including the laying down; that was the contract

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contract price for the cable delivered to the company and laid from shore to shore.

2588. What is the annual charge for the repairs?—I can give it you for the last three years. In 1865 it was 1,456 *l.*; in 1866, 1,050 *l.*; in 1867, 2,674 *l.*; which added together would practically renew both cables at the original contract price in 15 years.

2589. Is it a fair estimate that a cable would last about 15 years?—A well-laid cable should last much longer than that.

2590. A large portion of your business is in Ireland, is it not?—A considerable part, but not a very large part.

2591. Is the Irish part more costly to manage than the English part?—No.

2592. But there are fewer messages pass over the wires in Ireland per mile, I suppose, than in England?—I cannot say that.

2593. You cannot give me any statistical information with regard to messages in Ireland, as distinguished from other messages?—I can give you the general result, speaking merely of my own company. We put up additional wires as the traffic grows, and we have fewer wires in Ireland on our posts than we have in England on the average.

2594. Then the more wires you have to a post the more remunerative the line is, I presume?—It is simply the evidence of greater traffic.

2595. And greater traffic means more remunerative working?—Our accounts will show that year by year our traffic has increased more and more, and our profits, after maintenance, increase more and more.

2596. Can you state the dividends that have been paid during the last three years?—In 1865 we paid 5 per cent.; in 1866, 6 per cent.; in 1867, 7 per cent. for the first half year, and 8 per cent. for the second half year.

2597. Your business is rapidly increasing in value, as I gather by these returns?—I can give you the business for three periods. In 1857 the receipts were 71,000 *l.* and odd; in 1862, 99,000 *l.* and odd; and in 1867, 146,000 *l.* and odd.

2598. Have you got your receipts for 1866 and 1865?—They are in the accounts.

2599. Have those accounts been handed in for 1865 and 1866 in the same way?—Only for 1867.

2600. Can you hand in the accounts for 1865 and 1866?—Yes, I can give you the receipts for 1865 and 1866. In 1865 the receipts were 128,000 *l.*, and in 1866, 137,000 *l.*

2601. Then, have you turned your attention at all to the subject of amalgamation with other companies?—We have discussed it repeatedly.

2602. In what item of your charges would you be able to economise by amalgamation?—In every item, more or less.

2603. Not in the maintenance of lines and instruments, for instance. I suppose there would be no saving there, would there?—Certainly there would.

2604. How would that be?—In combining workshops, as far as the maintenance of instruments went, and in combining lines, making perhaps two lines do in a given direction instead of 4, and in some cases six, which exist at present.

2605. You say that two lines would do the work of six?—Two sets of posts, with the whole of the wires upon them.

2606. Could you say at all what amount on your charges of 90,000 *l.* you could save by amalgamation; have you ever made the calculation. I do not press it, if you do not wish to answer it?—I cannot go into that.

2607. Your shares are 100 *l.* shares, are they not?—The stock representing ordinary shares.

2608. What was their price last year in the market?—I cannot give you that.

2609. You cannot give me any information with regard to the progress, in value, of the shares?—I can tell you, generally, that there has been a very considerable advance in the value of the shares.

2610. Since 1865?—Yes; corresponding pretty nearly with the increase in dividends.

2611. But could you tell me the price of the shares during last year at any time,

time, speaking roughly?—I can state a general opinion, but I do not think that that would be of any use to the Committee.

2612. Were they above 100 *l.*?—I think in November last they were about 100 *l.*

2613. There has been a rapid rise since that, I presume; I see that they stand at 153 *l.* at present?—There was a considerable rise upon the increase in dividend at the beginning of this year, and there has been a further increase.

2614. Were they below par at all during last year?—I think so; in the early part of the year they were a little below par.

2615. Mr. *Norwood.*] With reference to the posts, you stated just now the average period of their lasting; is it not the case that you frequently cut the posts down, and use those same posts again of a diminished height?—We do sometimes.

2616. And, of course, that reduces the expense?—Yes, somewhat.

2617. Are the old wires of any value when they are removed; are they saleable for any purpose?—For a very low amount; for old metal.

2618. I notice that there was rather a considerable difference in the cost of maintenance of submarine wires; in the three years that you gave us, they have varied very considerably. I suppose that they are liable to the accident of being dragged by ships' anchors, and being destroyed in that way?—Yes.

2619. Is it not the case that the facilities for picking up and repairing cables are much greater than they used to be?—We can ascertain the point of a fault with accuracy, and the appliances are such that we can, in ordinarily fair weather, repair any cable within a reasonable depth, such as our channel cables, also without much difficulty.

2620. And in a short period of time, I suppose?—Yes; in fine weather.

2621. Of course, the improvements in the manufacture of submarine cables have been very great in the last few years?—Very great, indeed.

2622. So that a new cable put down now would, of course, be of very much greater permanent value than an old cable?—Far greater.

2623. Your system, I believe, is this, that you have not a reserve fund for depreciation, but you yearly expend upon your plant what you consider an ample sum to keep it in perfect working order?—Yes.

2624. I need scarcely ask whether you consider that your plant is in perfect working order?—Yes; unless it was so, our traffic would fall off, instead of increasing.

2625. *Chairman.*] Your system of renovation is this, as I understand, that from time to time you are continually making repairs?—Continually.

2626. Your plan is not to let a post or a wire get in a bad state and then renew it wholly, but you are always at work keeping the line in efficient order?—Yes; if we allowed the posts or wires to get into a very bad state they would be blown down by the first rough wind; unless we keep the poles and the wires in a very efficient state it would be impossible to conduct our business properly.

2627. So that you may say that practically the whole of your plant is kept up to the state in which it was first arranged?—We consider that it is in a very much higher state of efficiency than it originally was, because we put in better material now than we originally put in at the commencement.

2628. With regard to the injury to wires by smoke, is there not an expedient for preventing smoke getting into contact with the wire?—Yes; by means of multiple cables in towns that injury which I was speaking of in connection with the galvanizing of iron wires would not take place.

2629. Is that system in force on your lines?—We use suspended wire in certain positions.

2630. You suspend cables with a number of wires within them, is that it?—Yes.

2631. And that is the means of preventing the injurious effect of smoke upon the wires?—Yes.

2632. How long has that system been in use?—It has been used by others for a much longer period than by us. I am not capable of giving you good evidence upon that point.

2633. If that system is adopted it will tend, will it not, to decrease the cost of replacing town wires?—No doubt of it. My remarks, with reference to town wires, applied, to a considerable extent, to wires brought in along the railways into towns

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which are the continuance of the same system which applies outside the towns, iron wires protected by zinc galvanising.

2634. I suppose in towns you do not use any poles for the wires?—We use standards or iron poles; in most cases iron poles in the large towns.

2635. I suppose that they are far less perishable than wooden poles?—Yes.

2636. So that you may set against the greater perishability of wires in towns the greater durability of the posts?—Means have been devised for making the wires less perishable in towns by the adoption of the cable system and of putting the poles upon a permanent basis, very much upon the same plan as the gas posts, making them of iron and solid.

2637. Mr. *Turner.*] Then in all large towns you carry your wires either upon the ground or over the tops of the houses; you do not carry them on posts through large towns such as Liverpool and Manchester, and so on?—No, always over the tops of houses or underground.

2638. Mr. *Leeman.*] Were you with the British and Irish Magnetic Telegraph Company in 1862?—Yes.

2639. Do you remember in 1862 this report of your company: "The increased number of messages on those circuits has so far proved inadequate" (that is for the traffic between London, Liverpool, Birmingham, and Manchester) "to compensate for the reduction in rates, and experience shows that a charge of 1 *s.* is unremunerative." In the next report, in 1863, you state: "The operation of the 1 *s.* tariff upon a very large section of the company's lines continues to be severely felt; and the increased business that has resulted from this reduction, whilst entailing heavy additional expenses in the transmission, still leaves the receipts on that section far below their previous amount. The experience of more than a year's working of the 1 *s.* tariff fully confirms the views expressed in the last report, that for any but very short distances it is utterly unremunerative." And in 1865 there is this report: "In the month of May the extension of the lines of the United Kingdom Telegraph Company to Scotland was completed, and the reduced tariff of 1 *s.* came into operation upon those long circuits, and, in the course of the summer, in different other districts. The further experience thus gained of the practical result of a uniform tariff of 1 *s.* irrespective of distance, fully confirms the opinion always expressed by the directors as to its unremunerative character. The effect in the case of this company has been to absorb a very large portion of the increased revenue in unavoidable additional expenses." Do you agree in that?—I am not prepared to say that I do at present, but I did then.

2640. Did you up to 1865?—I did at the time that that report was published; I may mention that that referred to the reduction from 4 *s.* to 1 *s.*, which was very seriously felt by a trading company for some time after such a reduction, and our object was to make a profit for our shareholders to the present time.

2641. You say that was your opinion at the time; when did that opinion change?—By the effects of the reduced tariff that we generally introduced at that time.

2642. Do you think now that a uniform rate, irrespective of distance, will pay?—That would depend upon the way in which it was introduced.

2643. Take it from here to Glasgow, if you like; what do you say there?—I am not prepared to go into that argument.

2644. You are a practical man; first of all, tell me this, we have heard a great deal here about Belgium; what is the longest distance that any telegram can be sent in Belgium?—I have not gone into the details of Belgium at all, as far as distance goes, but I believe about 150 miles.

2645. The half-franc rate which we have been hearing about in this room would be limited to 150 miles?—I presume so.

2646. Now, Switzerland; what is the longest distance that a telegram is sent in Switzerland?—I have no particulars upon that point, but I have no doubt that they can be found by reference to the published accounts of the telegraphic administration.

2647. Have you seen the Petition which your company put in against this Bill?—Yes.

2648. Did you agree with it?—I represented the company.

2649. Did you agree in the statements contained in the Petition?—I have no doubt that I did.

2650. Now,

2650. Now, then, I will ask you this: do you think that the Post Office is capable of conducting telegraphic operations?—At that time I did not think so.

2651. You mean at the time of the Petition?—Certainly not.

2652. That is, how long ago; how long ago is it since this Petition was sent in?—As nearly as I remember, when the Post Office were working in opposition to the companies.

2653. That is some two months ago; the Petition has been presented, you know, since this Bill came into Parliament?—Yes.

2654. Whatever may appear, therefore, on this Petition, you would concur in?—As representing the Telegraph Company.

2655. As representing the Telegraph Company, you would; would you agree in this, that the Post Office is entirely unfit to perform the office of an Electric Telegraph Company?—We push arguments very far, when we are in opposition.

2656. Did you agree with this when you put it upon this document: "The Post Office is entirely unfit to perform the office of an Electric Telegraph Company"?—I do not think it is necessary for me to answer that question.

2657. Did you agree in this: "Its present officers and servants are really unskilled in the manipulation of the Electric Telegraph"?—There was no possible doubt about that.

2658. Did you believe that that was a reason why they should not have the power placed in their hands that this Bill seeks?—Unless they arranged with the existing systems it would be very difficult for them to carry out the telegraph.

2659. Are you to go into that system?—Not that I am aware of.

2660. Are you one of the gentlemen that are to have compensation?—One thing or the other, I suppose.

2661. But up to two months ago you did agree with whatever I may find in this document?—So far as it is customary to agree when you present a Petition in opposition to a Bill.

2662. I think that the Right Honourable Gentleman has asked you with regard to your capital; you have 636,000 *l.* in shares, have you not?—We have 515,170 *l.* in ordinary stock, and 121,700 *l.* in preference stock.

2663. And 152,000 *l.* outstanding upon mortgage?—Yes; on debenture bonds.

2664. Under the agreement which is made here with the Post Office, you are to have 20 years' purchase upon your gross receipts less working expenses?—That is the general principle.

2665. Does that include the 152,000 *l.* which is outstanding on debentures?—I do not know that it has anything to do with it.

2666. Is the 152,000 *l.* to be added to the capital of 636,000 *l.*?—Of course.

2667. Does the 20 years' purchase proceed upon the aggregate figure of 636,000 *l.*, plus 152,000 *l.*?—It has nothing to do with it as far as I am aware of.

2668. How do you mean, nothing to do with it?—It has to do simply with the profits.

2669. Your present profits are 8 per cent., is not that so?—You will see what they are.

Upon Mr. *Haly* objecting to the course of examination it was decided by the Committee that it should not be proceeded with.

2670. Mr. *Leeman.*] You have read, I suppose, the statement which has been put out by the Telegraph Companies with reference to the extension of the telegraph into remote districts?—I am not aware that I have read it; we have put out no statement at all.

2671. Have you read the statement which was put out by the other company?—I have glanced at it cursorily.

2672. Assuming for a moment that the Electric Telegraph Company has stated that the entire of its stations has upon the aggregate a receipt of 320,000*l.*, and there has been only 3 per cent. received at 1,100 stations; has that been the experience of your company; do you find that the extensions into remote districts have been paying your company?—I have not worked up any statistics upon that subject at all.

2673. I am not asking for statistics; have you found generally that the exten-

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sion of telegraphs into remote districts has paid the company?—We have made it a business never to extend until we saw a certainty of paying.

2674. *Chairman.*] A commercial company would proceed upon a wholly different system to a Government department with reference to the extensions, would they not?—Utterly different.

2675. You have to provide good dividends for your shareholders in order to satisfy the shareholders?—Yes, and if we diminish the dividend somewhat for a half year to the prejudice of the existing shareholders, they would have a ground for complaint.

2676. Even although you saw an ultimate prospect of a larger revenue at a future time?—Yes.

2677. Therefore you have to be much more cautious in your extensions than a Government department would have to be?—Naturally.

2678. With regard to extensions into remote districts, you would have to provide offices in these remote districts and persons to work the instruments?—Yes, we have not the facilities for extension that the Post Office would have naturally.

2679. And that would of itself make a material element in the consideration whether it would be expedient on financial grounds to make extensions into remote districts?—In nearly every case the question is as to the cost of the office and the staff to attend to the apparatus.

2680. Where you have an official already in an office, the increased expense for requiring him to work a telegraph instrument is very much less than it would be where you had no office and no person in that capacity?—Naturally it would be so.

2681. It then reduces itself almost to a question of wires, poles, and instruments, does it not?—Yes; of wires, poles, and apparatus.

2682. And the further expenses would be some addition to the salary of the official for working the instruments?—Yes.

2683. You have been asked about the statement of the company and the Petition of the company, I suppose that in the case of Petitions against Bills, everything is put in the strongest light to make out a case against the Bill, where parties are interested in opposing it?—Of course.

2684. And there is a certain colour given to the statements in those Petitions, which would not bear a very strict test of examination in a witness box, is that so?—I think that I ought scarcely to make any remark upon that subject; it is pretty well understood.

2685. Mr. *Norwood.*] You consider that it is the duty of the Committee to be the judges as to the value of the statements given, I suppose?—Yes; if we have overstated our case, it will be discounted.

2686. You have been asked with regard to the remunerations of the 1 *s.* rate, under what conditions was the 1 *s.* rate adopted by your company?—Under conditions of competition with a new company coming in to divide the existing traffic.

2687. And also as regards the universality, if I may so express it, of your lines at the time when you tried the 1 *s.* rate; did you extend it everywhere through the United Kingdom, or only through a part of the United Kingdom?—We only applied the 1 *s.* rate on the long circuit, as our competitors stepped in to oblige us to do so.

2688. At that time did your wires extend over the whole of the United Kingdom?—No.

2689. Over what part?—On a number of main lines to different points in Great Britain and Ireland, but our system was not nearly so extensive as the Electric Company's; it was then extended to some 400 points.

2690. In your opinion would it make a very considerable difference if you had the control of the whole of the wires in the United Kingdom, as to whether you should introduce the 1 *s.* rate, or whether you had control over a part of those wires?—It would make a very considerable difference, so much so, that we at present have the 1 *s.* rate extending to any distance under 100 miles; and we have introduced continually every few years, a reduction or rather extensions of the low rates, to an increasing distance.

2691. Do you think that it might be prudent to establish the 1 *s.* rate over the whole kingdom, when the whole telegraph system was amalgamated, but it might be imprudent to do so when you only have a part of the system in your hands?

hands?—There is no doubt that a united system can be worked much more cheaply, and that therefore a lower rate can be afforded by it, than by divided systems under different management.

2692. Mr. *Norwood.*] Have you taken into consideration Mr. Allen's suggestion of a 6*d.* message of 15 words, including the address?—I have not gone into that at all.

2693. Have you not considered whether it might not be a satisfactory arrangement for the public, and more profitable to the companies than the present one of 20 words, excluding the address?—It requires some time to educate the public to an extended use of the telegraph.

2694. You are not prepared to give a strong opinion, one way or the other?—My opinion would be against adopting too low a rate too hastily.

2695. Allow me to suggest that it is really not a very great reduction in a money point of view; it is not very much cheaper to get 15 words for 6*d.* than 20 words and the address for 1*s.*; 6*d.* looks smaller to the public than 1*s.*; and do not you think it might add a large increase to the business?—Each message is an operation by itself; each message has to be transmited separately and delivered separately.

2696. You mean that the terminal charges would be as great in the one case as in the other?—Yes.

2697. Mr. *Potter.*] Supposing you introduced five words more into the body of 15 words, it would cost you a very trifling sum more; would it be a perceptible increase of cost?—It would occupy more time and a greater number of wires. Unless you increased the wires, you could not transmit a greater number of words.

2698. But the introduction of five words would bear a very small proportion to the cost of the whole message?—One-third of the whole, if it is a 15 words message.

2699. You do not say that it would cost one-third more to put the addition of 5 words in, considering that the terminal charges at both ends were the same?—It would occupy one-third more time in the transmission by the wires, and therefore require one-third more wires to transmit, for a given amount of money.

2700. Taking the plant from Glasgow to London, and London to Birmingham, would there be any perceptible difference in the price between the cost of a telegram from London to Glasgow, and from London to Birmingham; would the longer length cost anything more, if you had no new plant to put down?—Yes, certainly, there is the greater maintenance.

2701. The calculation would be a very minute one, would it not?—No.

2702. Have you any idea what it would be?—I cannot give you the details.

2703. Mr. *Leeman.*] Can you tell me what about is the proportion of the messages that are under 20 words, and those above?—Somewhere about 10 per cent. above 20 words in the number of messages, but in length it would be somewhat more than that, that is to say, they are 10 per cent. in the number, but in length, some messages will range from 20 to 30 words, others from 30 to 40, others from 40 to 50, and so on.

2704. But what would be the proportion in the number that come into the hands of the company for a message above 20 words as compared with a message under, or say, 20 words?—I cannot give you that exactly, I have not gone into the detail of it.

2705. Would 10 per cent. about represent it?—It would be more than 10 per cent., slightly more.

2706. Mr. *Goschen.*] Have your receipts during the last six months been again increasing?—Our accounts are not made up yet.

2707. Are you aware whether they are going on satisfactorily?—Our traffic gradually increases from the experience that we have.

2708. But you do not anticipate that there has been much increase on the receipts, as shown in the year 1867?—Until our accounts are made up it is very difficult to answer that inquiry. Our half yearly accounts are not yet made up.

2709. How often do you balance your books?—Every half year.

2710. Are you able to state it for the six months?—I can give it to you up to nearly the end of May.

2711. Within how many days of the end of May?—Up to the 23rd of May.

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2712. What is the state of things up to that time?—The total receipts are 59,000 *l.* against 55,000 *l.*

2713. That means to say, that you made them up last year, also up to the 23rd of May?—No, they were made up last year to the 25th of May, it depended upon the end of the week.

2714. That is, roughly speaking, 4,000 *l.* increase?—Rather more; 4,500 *l.* would be about right.

2715. Roughly speaking, upon five months?—Yes, roughly speaking, nearly five months.

2716. Then that would be 9,000 *l.* for the 10 months; would it be an exorbitant calculation to say that you would have 10,000 *l.* increase in the year 1868?—I think not at all; 1867 was a dull year.

2717. One thousand eight hundred and sixty-seven was a dull year in consequence of the commercial depression; but the first six months in 1868 have shown a little revival?—Yes, they have shown that increase.

[The Witness withdrew.

Henry Weaver, Esq., called in; and Examined.

H. Weaver, Esq.

2718. Mr. *Goschen.*] Are you the Secretary of the Electric and International Telegraph Company?—Yes.

2719. Have you heard the evidence given by the last witness?—I have.

2720. From your own experience, as regards the cost of maintenance and replacing posts and wires, do you agree on the whole with the evidence given by Mr. Bright?—Pretty much, I do; but my opinion, according to my own experience, is that our renewal and maintenance is continually going on, and has been since the lines were put up; and the lines which have been the longest constructed are really the best, because they have been the more recently renewed.

2721. You renew them better than they were originally?—Yes, better than we did originally. On the average we repair differently. We prepare the timber in a particular sort of way now, which in former years we did not do.

2722. Could you give me the average life of a post on your line?—I think that that would give you no very just idea of what the real life of a post is, because in putting up a new line we may buy a cargo of timber, and it may be of a very different sort, although, perhaps, we give the same price for it. Therefore, when that line is put up, perhaps, for the last two or three years, some of the timber will be perfectly good, whilst the other we shall have to renew. Whenever a post is out of order, or is decayed at all, we put a new one into it, so that I contend we are continually renewing and continually repairing, and, therefore, that the line at any given time is as good, if not better, than when we first put it up.

2723. You mean that you keep it in such order that you are not obliged to put by money to replace it?—Certainly not, with regard to the land lines.

2724. With regard to the submarine lines, how is it?—With regard to the submarine lines, we have a very large reserve fund, as you can see by our accounts.

2725. What is your reserve fund with regard to the submarine lines?—The reserve fund up to the last half-year, up to December 1867, was about 140,000 *l.*

2726. For what purposes is that kept?—That is kept for exceptional accidents both by land and by sea, but more by sea. For instance, as an illustration, we paid out of our reserve fund for the snowstorm in 1866, or rather we debited the reserve fund by about 10,000 *l.* I think you will find in those accounts that the rest was debited to the maintenance. In that same half-year 1866, you find that we spent a very large sum for maintenance, upwards of 40,000 *l.*, so that a part of that snowstorm was debited to ordinary maintenance, and a part to the reserve fund.

2727. What was the cost of the snowstorm altogether?—It is a very difficult thing to say the exact sum that it cost us, because you understand there were lines at that time some of the posts of which possibly would have to have been renewed

renewed at a period very soon after the snowstorm occurred, whereas that snowstorm completely destroyed many of our lines altogether.

2728. *Chairman.*] It was the crisis of the fate of the weak poles?—Exactly so, in very many cases; but the Great Western from Bristol to London was entirely destroyed, and the North Western from Rugby to London, so that we had to renew those lines at that time entirely both in posts and wires.

2729. Mr. *Goschen.*] Did it cost you, on the whole, as much as 20,000 *l.*?—Yes, I should think it would.

2730. Have you ever had a case like that before?—No, never; in the 22 years of our existence we never had a case of that kind.

2731. Have you suffered from hurricanes at all?—Only slightly; they are only local, generally, therefore they do not touch us so much as that snowstorm.

2732. What submarine cables have you got?—We have got several submarine cables. We have two cables to Holland; those are our largest cables. We have got two cables to Ireland, one from St. David's Head to somewhere near Wexford, and the other from a point in Scotland to a point in Ireland, bearing from Port Patrick to Donaghadee. That is not the exact point, but that will represent it sufficiently for your purpose.

2733. What has been the cost within a few thousand pounds of your submarine cables; the first cost?—I should think perhaps 200,000*l*, speaking roughly.

2734. You mean that in your assets your submarine cables might have cost you 200,000*l.*?—Yes, perhaps it is not quite so much, but there is not very much difference.

2735. Are they more liable to deterioration than the land lines?—I must qualify that answer. Our sea cables are subject to deterioration up to a certain distance to sea, that is what we call the shore end; you see that they are subject to ships' anchors, and especially during stormy weather, which would be when ships drag their anchors, our cables are liable to damage, but as regards the deep sea portions, if I may so call it, of our North Sea cables, they have been very little, if at all, interfered with. We believe that they are in as good condition as when they were laid down, for anything that we know, because we have never had them up. It is not the middle of the sea cable that is subject to depreciation, but the land end that is liable to be interfered with by ships' anchors.

2736. *Chairman.*] Besides that, when you get into a certain depth of water you escape the ravages of sea insects, do you not?—I do not think that in the North Sea we are subject to any insects at all.

2737. Mr. *Norwood.*] The shore ends of your telegraph cable are stronger than in the other parts, are they not?—Very much stronger.

2738. *Chairman.*] Also there is a great deal of friction, is there not, on rough coasts in the shore ends of the cable?—Yes; on rough coasts there is, but our cables are not so much subject to that, because we lay them from Lowestoft to a place called Sandford, in Holland, and it is quite a sandy soil.

2739. It is sandy at both ends, is it not?—I think it is more mud at this end.

2740. Mr. *Goschen.*] What is your whole length of wires?—Fifty thousand miles of wire and 10,000 miles of line; that is nearly about it.

2741. I think that the British Magnetic is 19,000 or 20,000 miles?—Yes, I think it is.

2742. Have you ever compared the cost of your maintenance and your repairs with that of the British and Irish?—I have made a calculation in the percentage, and I can tell you what our maintenance costs us per cent. of our revenue; it costs us somewhere about 57 or 58 per cent of our revenue.

2743. *Chairman.*] Is that the working expenses?—That is everything, working expenses, maintenance, and everything else; our whole cost is about 58 per cent.

2744. Mr. *Goschen.*] Can you state the increase of your revenue during the last three years?—I should not like to state it offhand; it is in the accounts, but I should think that we have increased in round numbers by about 10 per cent. I could tell you what we have increased since 1862; in round numbers we have increased by about 25,000 *l.* on an average per annum.

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2745. And have you any reason to doubt that your increase in 1868 will be the same?—Not the slightest; I believe that it will be quite as much.

2746. You would be surprised if it were not?—I should, indeed; I have not made up the account yet, but I have every reason to believe that we shall pay our usual dividends and put by our usual reserve.

2747. And perhaps even a little more?—Very likely; I should be sorry if it were otherwise.

2748. Then, I think, you said that 140,000 *l.* was your reserve fund?—Yes; you will see that the trust fund is stated in the account, and then at the bottom you will find on the other side of the account the money which was the balance over and above after paying the dividends. You will find a variety of credits in addition to that sum which made about 140,000 *l.* or something like that.

2749. That you hold in reserve for the renewal of the Submarine Cable?—Not exactly for the renewal of the Submarine Cable, but for the security generally of our property and dividends. We consider that it is a good principle. That principle was established by our late chairman, Mr. Robert Stephenson, in the year 1858, and we have religiously kept to it ever since.

2750. It is to cover possible depreciations of the property from whatever source they may arise?—Yes, to cover the depreciations to which property like ours is subject.

2751. Your property is subject to depreciations, no doubt?—Our land wires are not at all subject to depreciation; our sea cables, of course, are subject to accident from ships' anchors. When I say that the land wires are not subject to depreciation I mean this, that there is no actual depreciation takes place more than what we continually renew and maintain out of every half-year's revenue.

2752. But, on the whole, the business is such that like every prudent man you have put back 140,000 *l.* to keep it in reserve for the repair of casualties to which the business is exposed?—That is so.

2753. Mr. *Norwood.*] About this reserve fund, are you quite certain that you are right in the answers which you have just given. Is not your reserve fund the balance between your profits and the amount which you are authorised by law to divide?—No, nothing of the kind.

2754. Are you not restricted by Act of Parliament?—There is a restriction in our Act of Parliament. If you will read the clause you will find that the restriction is this, that we are limited to pay 10 per cent., but every year since we have been established that we have not paid 10 per cent. we may make it up to that amount.

2755. I have noticed in the accounts that your principle really and practically is to pay a dividend of 10 per cent., and then carry your surplus profit to what is called a reserve fund or a trust fund?—Yes.

2756. It is, as I stated to you just now, that you are authorised to divide 10 per cent., and you have a sufficiently good business to lay by a sum of money which now amounts to 140,000 *l.* What I want to get information upon is this: the Committee is not to understand that this reserve is absolutely necessary as a protection to your company, you are forced to make that reserve?—No, not at all.

2757. Take it the other way, that I am mistaken in my impression; you think it is absolutely necessary to reserve 140,000 *l.*?—I do not say that we think it absolutely necessary to reserve 140,000 *l.*; but we think it absolutely necessary to reserve a sufficient sum for the security of our property and dividends.

2758. With regard to your submarine cables, have you a depreciation account there; does the first cost remain in your books unimpaired?—Yes.

2759. The cost of repairs, I see, last year, exclusive of the submarine cables, was about 56,000 *l.*?—Quite so.

2760. Your submarine cables cost you rather more than 5,000 *l.*?—The average of our submarine cables, over five years, is about 4,000 *l.*

2761. When you speak of the shore ends of those cables, of course they are subject to accidents which you cannot very well avoid?—Very much.

2762. And of course you will state what Mr. Bright said just now, that your entire plant is in first-rate order?—In perfect working order.

2763. Mr. *Leeman.*] In 1867, taking the gross receipts of your company, was 76 per cent. received at 18 stations?—Whatever there is in the book is perfectly right, you may take that for granted.

2764. If I were to put the whole of this book, "Government and the Telegraphs," upon the minutes, you would confirm it?—Certainly I should confirm it up to a certain point.

2765. Am I to take it as a fact that 76 per cent. was received at 18 stations?—Yes, that is perfectly right.

2766. Fifteen per cent. at 81 stations?—Yes.

2767. And only 9 per cent. at the remaining stations?—That is quite right.

2768. Is it the fact that half the money received at the 15 stations which paid 75 per cent. was received in London?—Yes.

2769. And a quarter of the 75 per cent. was received in Liverpool and Manchester?—Yes.

2770. And the remainder at the 12 other large towns?—Yes, certainly.

2771. Is this correct, that three-fifths, that is 60 per cent. of your entire receipts last year, was received from those 15 stations; that is to say three-fifths of your receipts at the 1 *s.* rate?—That is about right, that is from 55 to 60 per cent.

2772. Sixty per cent. of your entire receipts would be at 1 *s.*?—Yes, that is about right.

2773. Will you just listen to this: "The Promoters of this plan ignore altogether the bitter experience of the Railway Companies that extensions into remote and sparsely peopled districts operate as suckers rather than feeders. In the course of last autumn the Electric and International Telegraph Company caused lists to be prepared of all the parishes and places in Great Britain having upwards of 1,500 inhabitants which were unprovided with telegraphic communication. The whole of the parishes and districts with 1,500 inhabitants and upwards numbered not 10,000, or even 5,000, but only 1,391; of these 1,391, more than 350 were found to be supplied by the Magnetic and the United Kingdom Telegraph Companies, or by the independent wires on the lines of the South Eastern, Great Western, Brighton, and other railways; so that there are not more than 1,000 parishes in Great Britain containing 1,500 inhabitants which do not possess direct telegraphic communication." Is that true?—That is perfectly true.

2774. Now, listen to this: "The entire lists, however, were forwarded to the superintendents of the different districts of the Electric and International Company, with the following note from the Secretary: 'Attached is a list of places in your district containing 1,500 inhabitants and upwards at which there are, at present, no telegraph stations. I wish you to go carefully through the list, and to report upon any places at which you may consider it desirable to open stations'"; did you send that letter?—I did.

2775. Did you receive these answers; first, from the superintendent of the western district: "I have gone very carefully through the lists returned herewith, and I have also obtained reports from the various inspectors and principal clerks in charge. The result is, that I am unable to name a single place at which it would be desirable to open a telegraph station. A very large proportion of the places named are within a mile or so of stations already; so near, indeed, that it would be ridiculous to open others; in other cases the hamlets and parishes named in your list are, in fact, places with miles of huts and cottages, the inmates of which are quite innocent of the telegraph and its use." That is one of your answers?—Yes.

2776. Do you believe in its truth?—Yes, I do.

2777. Here is another from the superintendent of the south western district. "Most of the places are small rural districts of great extent, where the inhabitants are much scattered. I have marked such places as 'scattered,' others are small agricultural towns, from which we should probably get one message a month; I have marked them as 'unimportant.' Other places are already served by our existing offices, which are really nearer than the distances given. For instance, our Salisbury office is in Fisherton Anger parish." Was that another answer?—Yes.

2778. Now take this from the superintendent of the Northern district. "There are none at which it is desirable to open stations, or, at any rate, at which any outlay for the purpose could be recommended. I have returned the lists fully noted. A large part of the places named are large parishes with a widely scattered population, and without any centre of importance. Other

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places (and those are the largest) are really parts of great towns at present amply supplied with Telegraph Stations, but which, constituting district parishes, are shown separately in census returns." Is that true?—Yes.

2779. Is this true: "The reports from the other districts were all in the same strain. It is obvious, therefore, that if the Chancellor of the Exchequer was prepared to carry the original plan into effect, he would be incurring an enormous outlay without the smallest prospect of any profitable result, financial or social"?—Yes.

2780. *Chairman.*] When was this circular sent out; it says last autumn?—I think the date is on it.

2781. It says in the course of last autumn?—It was somewhere about October.

2782. Was it sent out before or after notice was given by the Post Office?—I could not say exactly what the date was.

2783. I think you will remember whether it was sent out with reference to the Post Office or not?—There is no doubt about it that the whole were sent out with reference to the scheme of the Post Office.

2784. When those lists were sent out to the different superintendents, it was with reference to the proposed purchase of the Telegraph Companies' lines by the Post Office?—No doubt about it.

2785. This list was sent out in order to get up a case for your then notion of opposing the Bill, I suppose, at the time that it was sent out?—Rather with the notion of getting up the facts for the purpose of writing that pamphlet.

2786. You wanted material for the pamphlet?—Yes.

2787. That was one of the steps which you took to get the material?—Quite so.

2788. In the answer of the superintendent of the western district there is this passage: "The result is, that I am unable to name a single place at which it would be desirable to open a telegraph station." In what sense do you understand that word "desirable"?—"Desirable" means that, of course, it would be very desirable to open one for the public good, but it would not be desirable for us, because it simply would not pay.

2789. It goes on to say: "A very large proportion of the places named are within a mile or so of stations already; so near, indeed, that it would be ridiculous to open others." Do you think that, if you lived within a mile or so, or what is called in Scotland "a mile and a bittock" of a station, you would not like a station to come a little nearer you?—Are you speaking to me on the part of the public now?

2790. Yes?—That would change my view considerably, no doubt.

2791. On the part of the public, you would not think it ridiculous, if you lived within a mile and a half of a station, to have it brought within 200 or 400 yards?—Possibly not, if I wanted to send a message.

2792. Then I suppose that the ridiculousness of the proposition was unquestionably with reference to the commercial interests of the Company?—Entirely

2793. Therefore, though it might be ridiculous when you have to find an office and an official to work an instrument, it might not be ridiculous if you had an office already existing, and some are constantly there?—Certainly not.

2794. So that the sense in which we may understand the answers from the superintendents of the different districts that they were writing with reference to the commercial desirability of opening stations, and not with reference to the public interests?—Entirely so; of course, we always look first to profits, and then to the public interest.

2795. You understand the marks upon the map, do you not?—Yes, perfectly.

2796. Do you think that it would not be desirable, I am not saying in the interest of the Post Office at the present moment, but in the interest of the public, to see each of those round dots which represent money-order offices crossed with a cross, representing telegraph offices?—Certainly, it would be very desirable.

2797. Do you think that that might be done with a prospect of no loss, or with a prospect of some remuneration by the Post Office, who have already offices, when it would be ridiculous, in a commercial point of view, for a Telegraph Company to have done it?—I can hardly look at it from that point of view;

view; I have been so long used to looking at it from our point of view, that it is difficult to adopt that view, but I have no doubt that you have calculated the expense that it would take the Post Office to put lines there to keep them in order, and to work them; but I would rather not give an opinion upon that, because I do not think that my opinion is worth 2 *d.*

2798. However, we may consider this pamphlet as the views of those who supplied the materials for making it, and as being put together in one point of view, and that is the point of view of a commercial company that was not anxious to have its business taken from it?—Entirely.

2799. Mr. *Goschen.*] Should the companies not get the terms that have been proposed to them, I suppose we may hear more about the pamphlet then, and you will be prepared to substantiate most of the statements in it, and supposing the committee should ultimately not agree to the heads of arrangement so far as to come to between the Government and the Electric Telegraph Companies, I suppose then there may be another change of opinion with regard to the statements issued by the Electric Telegraph Company?—I would rather reserve my answer to that question until it occurs.

2799*. I only thought I would warn you to reserve that opinion?—Quite so.

2800. Mr. *Turner.*] What you mean to say is this, that the interests of the Telegraph Companies and the interests of the public may in your opinion differ occasionally?—They do differ occasionally, there is no doubt.

2801. Therefore when you give your evidence as an officer of the company, you come in the company's interest and you take the company's point of view?—Exactly.

2802. When you give your evidence as one of the public apart from any cost to the company, you give your evidence from another point of view?—I have not given my evidence from that point of view, so that I do not know what it would be; I am not prepared to do so; I am a company's officer entirely.

2803. And you give your evidence with reference to the company's interest?—Yes, I give my evidence with reference to the company's interest and with reference to paying a dividend, that is my business.

2804. And as large a dividend as possible?—Quite so.

2805. Mr. *Leeman.*] Without reference to your being a company's officer, is this statement in the document the fact; "The number of telegraph offices in Belgium (exclusive of those at railway stations) is only 356; they connect 335 towns and villages. Of these 335 places there are 21 which do not dispatch on an average one telegram a day, and there are upwards of 100 stations worked by the railway officials at which the average take of public messages falls short of one a day"?—Yes, that is perfectly correct.

2806. Did you ascertain that yourself?—I did ascertain it.

[The Witness withdrew.

[Adjourned to Monday next, at half past Eleven o'clock.

Monday, 13*th July* 1868.

MEMBERS PRESENT:

Mr. Chancellor of the Exchequer.	Mr. Leeman.
Colonel John W. Fane.	Mr. Norwood.
Mr. Goschen.	Mr. Potter.
Mr. Graham.	Mr. Sandford.
Sir Frederick Heygate.	Mr. Charles Turner.

THE CHANCELLOR OF THE EXCHEQUER IN THE CHAIR.

M. H. Foster, Esq., C.B., called in; and Examined.

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2807. *Chairman.*] You are the Principal Officer of the Finance Division of the Treasury?—Yes, I am.

2808. You were employed a few years ago, were you not, on a special mission to Turkey?—Yes, on two occasions.

2809. On one occasion with Lord Hobart?—On one occasion with Lord Hobart, and on another occasion by myself.

2810. When was that?—In 1862 and 1863.

2811. Was that under Lord Palmerston's Government?—Yes; Lord Russell sent me out on both occasions.

2812. What was the object of your mission?—Generally to inquire into the state of the Turkish finance, the prospect of the country, and the means of raising its revenue and developing its resources.

2813. Was that with a view to put the British public in possession of the financial resources of Turkey, so that they might be able to form an opinion as to what assistance Turkey might get in this country in the way of raising money?—Yes, that was the object of my mission on the first occasion. On the second occasion it was at the wish of the Turkish Government in connection with some financial arrangements. I believe I materially assisted in making the Ottoman Bank an Imperial bank.

2814. You were also sent out to India on a special mission?—Yes, I was there nearly three years.

2815. In what character did you go to India?—I went to revise the whole system of accounts in India. I was engaged nearly three years there, and carried out a complete change in the mode of keeping the accounts; and I went into other monetary questions.

2816. When was it you went out?—I went out in 1863, and came back in 1866.

2817. Did you receive, after your return, any distinction in recognition of your services?—The Queen graciously appointed me a Commander of the Bath.

2818. Since that time you have been appointed to the office of principal officer of the finance division of the Treasury?—Soon after my return home.

2819. In succession to Mr. Anderson?—Yes.

2820. Has Mr. Scudamore submitted to you his estimate of the revenue to be derived by the Postmaster General from the telegraphs?—I have gone through the figures upon which he has made his computations, and checked them all.

2821. First of all, take his estimate of revenue; you have checked that?—Entirely.

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2822. He gave us a maximate estimate, a minimum estimate, and a medium estimate, and he has taken his medium estimate as the basis of his calculations?—Yes.

2823. Do you think in his estimate he has been too sanguine in his supposition of what would be the result of the transfer?—I think in most cases he has been extremely moderate; in one or two points he might have shown a much larger figure.

2824. Larger than the maximum or larger than the medium?—I think larger than the maximum.

2825. If he had been over sanguine he might have put his maximum higher than he did?—Yes.

2826. You do not think his maximum is excessive?—No.

2827. As regards his medium, you think it very moderate?—I think it very safe.

2828. Did you go into the question of working expenses?—I went through the accounts of the companies to see what their expenditure has been, and checked Mr. Scudamore's calculations with reference to them.

2829. Then you say that you are entirely satisfied with the estimate he gave of revenue; you think it is a safe estimate?—I think it is a very safe estimate.

2830. Mr. Scudamore did not go into particulars as to his estimate of the cost of purchase, but he stated that he thought 6,000,000 *l.* would be an outside sum; have you gone into the data upon which he based that calculation?—Yes, I have checked every calculation he made upon the subject.

2831. I do not ask you to go into particulars, because the Committee decided that Mr. Scudamore was not to be asked upon particulars, but are you satisfied that his estimate of 6,000,000 *l.* is a safe estimate?—I think he has in each case taken the extreme point that an arbitrator would take; if I were the arbitrator, I should not give what he has estimated.

2832. You think that 6,000,000 *l.* is decidedly the outside figure?—I do not see how that can be reached.

2833. Mr. *Norwood.*] What is the general nature of the data upon which you have come to this conclusion, take the last subject, the question of cost; have you seen the draft agreements between the Post Office and the Telegraph Companies?—I have not seen the draft agreements between the Post Office and the Telegraph Companies.

2834. Have you seen their printed accounts?—I have.

2835. You have examined them?—Yes, I have.

2836. Have you had any means of judging the amount the Railway Companies are likely to require?—I have taken the data upon which Mr. Scudamore made his computations, and the terms which the Government have proposed, and I have reckoned upon that what the result would be.

2837. Then, in fact, you have tested the accuracy of Mr. Scudamore's figures, but you have not been able to do much more, I presume?—I have tested the accuracy of Mr. Scudamore's figures he has taken from the company's accounts, and taken the terms which have been offered by the Government, and seen that the result come to what Mr. Scudamore places it at.

2838. That is the Railway Companies?—All the companies.

2839. It is to a very great extent guess-work, what the amount of the Railway Companies' compensation will be, is it not?—No doubt it is, but then the railway compensation proportion is a small part of the whole, and there is quite sufficient margin to cover any inaccuracy that may have been made in these calculations.

2840. *Chairman.*] Without telling us what the data are, you have gone into the compensation to be paid to the Railway Companies?—Yes.

2841. Therefore, the estimate includes the sum to be paid to the Railway Companies, based upon certain data?—Yes.

2842. Mr. *Norwood.*] You have thoroughly examined the figures, and there can be no slip in Mr. Scudamore's figures, because you would have ascertained it if it had existed?—I have gone into them independently, and I agree with them within 1,000 *l.*, in large sums, and within a few hundreds in small sums.

2843. *Chairman.*] Did you inquire into whether his data were such data as you ought to calculate upon?—Yes.

2844. And

2844. And you were satisfied that the data he gave you were the right data?—Yes.

2845. Mr. *Turner*.] In looking at this question, did you consider yourself acting for the public or for the Government?—Being a Treasury officer I looked at it with a Treasury view.

2846. At the same time you did not consider that your judgment was warped by that?—No; being a Treasury officer my judgment would be warped against the risk of additional expenditure if it were warped either way.

2847. In fact, you have no reason to suppose that your judgment would be warped in favour of the Promoters so as to arrive at a larger amount than in the interests of the public it would be desirable to give?—No; my position in the Treasury would warp me the other way.

2848. You may be considered as a gentleman looking at this matter in the interests of the public, and for the Government as the interest for the public?—Yes.

2849. Mr. *Goschen*.] In fact, you would look at it from very much the same point of view as Mr. Scudamore has, who is also an officer of the Government?—He is not charged with the finances of the country.

2850. His credit would also be at stake in case his estimates should afterwards turn out not to have been well founded?—His personal credit, but the credit of his department would not be injured, as the credit of the Treasury would, if there should ultimately be found to be a larger expenditure required than was estimated.

2851. You do not think the Post Office are so anxious to show a large surplus as the Treasury is?—It is specially the duty of the Treasury to see that estimates of expenditure are not exceeded.

2852. Do you think that the Post Office would be less anxious to have a surplus than the Treasury would be?—I have no doubt that the Post Office are extremely anxious to have a surplus.

2853. Have you checked Mr. Scudamore's previous estimates, the estimate he made in February for instance?—Not at all in the same detail.

2854. Did you check it at all?—Not officially at all; I glanced through it as a matter of curiosity, but did not go into it officially.

2855. In April or May, when the Bill came on for second reading, and Mr. Scudamore again made other estimates, did you check the figures at all?—Not at all in the same way as I have these.

2856. When have you checked those figures?—Within the last two or three days.

2857. You had not looked into it before?—No, not with sufficient minuteness to give an opinion either way.

2858. Could you explain to the Committee the item of 45,000 *l.*, which is to be the surplus receipts from the continental traffic?—I am afraid I have not the papers with me. I have not come prepared to go into the details of each calculation.

2859. Have you checked that source of revenue; that 45,000 *l.*?—If it is inclusive in Mr. Scudamore's estimate, I am sure I have.

2860. It has not left any impression upon your mind; it is peculiar in this respect, that it is a new item since the last estimate; have you satisfied yourself that that sum of 45,000 *l.* is the right sum to take (*Mr. Scudamore handed a paper to the Witness*)?—I perfectly well recollect going through this; the gross earnings were reckoned at 160,000 *l.*

2861. The gross earnings of what?—Of the submarine cables.

2862. Is that all the various submarine cables belonging to the two or three companies?—Yes.

2863. Were those gross earnings taken on an average?—

Mr. *Scudamore*.] They are the present earnings.

Mr. *Goschen*.] Pray, Mr. Scudamore, do not prompt.

Witness.] Of that 160,000 *l.* one-fourth was to be taken as the cost of working, that leaves 120,000 *l.*; the Submarine Telegraph working was to be 16,000 *l.*, the repairs 7,500 *l.*

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2864. That which you are now giving is the analysis of the 40,000 *l.*?—Yes, that and other items brings it to 43,506 *l.*

2865. £. 16,000, 7,000 *l.*, and other items, into which we need not go?—Yes.

2866. Then there remains 120,000 *l.*; of that 120,000 *l.* there is to be a surplus of 45,000 *l.*, as I understand?—Yes.

2867. And the balance is to be divided amongst the companies in certain proportions, the details of which I do not wish to go into?—From that 120,000 *l.* there is to come off 43,500 *l.* for the working.

2868. I thought the gross earnings were 160,000 *l.*?—

Mr. *Scudamore.*] Perhaps I can explain that afterwards.

Witness.] With Mr. Scudamore's explanation of the detail, I followed him completely, and found that the result came to what he stated, the difference between the proportion which the Government is to get, and which the companies are to get, and how much they are to be allowed upon each of those messages, I could work out here from what I did then; the only point on which I do not at this moment see my way clearly is, the difference between the 40,000 *l.* and the 43,000 *l.*, which are both working expenses; but if there is any question between those two, it would make the receipts larger than they appear to be.

2869. Have you in this kind of calculation done more than just checked the additions and the subtractions in the general statement of Mr. Scudamore; I mean, have you made yourself responsible for the correctness of the figures generally?—As far as any data are to be got at, either from the accounts of the companies, or from this memorandum, which professes to give what the rates payable by the Government on account of messages are, I have taken those for granted.

2870. You have been into the accounts of the companies?—I have been into the accounts of the companies, and separately extracted all the different items

2871. And you come to the same conclusions as to the charges?—Yes.

2872. Have you satisfied yourself that the amalgamation estimate of Mr. Scudamore of 55,000 *l.* is a correct figure?—As far as it is possible we are obliged to trust to data given by the different companies.

2873. You have seen those data?—Yes.

2874. There seems to be nothing unreasonable to you in that; on the contrary, it seems to be the correct figure?—Yes, I think so.

2875. Over how many years have you looked at the companies' accounts?—Only the last year.

2876. That is to say, the year 1867?—Yes.

2877. Have you gone into the calculation of the probable increase in the telegrams?—Yes, I think that is moderate; I think there are one or two circumstances which might lead to a much larger increase; for instance, most of the messages start from central points, and the calculations are taken up to 100 miles, then from 100 to 200, and then from 200 to 600. The belt from 200 to 600 would cover an immensely larger space than the first belt; you would therefore suppose that, covering such a large space of country, the number of telegrams would be much larger, instead of which it is enormously less, and the only reason that I can see for it, at least the reason I can see for it, is the higher charge, and I believe that the telegrams applicable to that large extent of country with the low charge for the telegrams, would be very much increased beyond what is estimated.

2878. Have you noticed the fact, that in the accounts of the British and Irish Magnetic Telegraph Company there is no reserve fund, whereas in the case of the Electric and International Telegraph Company there is a large reserve fund?—I did not go into the reserve fund question.

2879. Have you seen the evidence taken last Friday with regard to the reserve fund?—I heard that examination.

2880. Does not it strike you that that is a very important element in the case that the question as to whether it is necessary to put by as a reserve fund a certain

certain sum to make good contingencies and to meet casualties is an important element?—In the submarine cables, I think it is, but there need not be one for the land lines.

2881. You think that the difference between the two as regards reserve fund, is mainly to be accounted for by the one having a larger proportion of submarine lines than the other?—I think that would be a sufficient reason.

2882. You have not gone very fully into the question of the reserve fund?—No, I have not.

2883. *Chairman.*] As to the question of continental messages, what I understand is this, that you took Mr. Scudamore's account of what the agreement was between the Post Office and the Submarine Telegraph Company as to the proportion of payments to be made to the one and to the other out of revenue?—I took that for granted from the statement that Mr. Scudamore gave me.

2884. You have not yourself gone into the agreement; you took it from him what the agreement was on those points?—Yes.

2885. And you based your calculation upon his statement of the nature of the agreement?—Yes.

2886. That memorandum handed to you by Mr. Scudamore comprises the agreement?—It gives all the particulars.

2887. The 45,000 *l.* was the sum which you calculated would be earned by the Government, after going through the various items?—Yes, and I went carefully through it; but it was rather complicated, and without a little explanation, one does not, perhaps, see one's way through it as well as one did with the explanation.

2888. Mr. *Goschen.*] Did you satisfy yourself upon this point, that the portion of revenue derived by submarine telegraph messages was not included in the 7,500,000, the number of telegrams put down as the aggregate of the companies?—That I am quite satisfied about.

2889. That the English portion of the Submarine Telegrams is not included in the 7,000,000?—Exactly; as regards that 7,000,000, I so far differed with Mr. Scudamore that he has taken the increase as a simple rate of increase, whereas the proper calculation would be a compound rate of increase, which would give a considerably larger number of messages than seven and a half millions; it would be 7,623,000, and that would follow through all his calculations, and so far increase the revenue.

2890. On the other hand, did you observe that Mr. Scudamore did not allow for increase of cost in sending messages?—He has allowed 10 per cent. increase.

2891. Mr. *Turner.*] You consider that Mr. Scudamore's estimate is a fair estimate to be made by a public man upon a question of this kind?—Perfectly; I think it is a moderate estimate.

2892. Not tainted in your opinion by any bias for the purpose of carrying the measure?—No; I think he has acted very fairly in his estimate.

2893. You say that as a servant of the Treasury you are bound to protect the interests of the public?—Yes.

2894. *Chairman.*] When you as a Treasury Officer examine any estimate of another department, is not it your duty to take an independent view, and not to assume anything which that department puts before you?—Certainly; my object is to see if I can detect any expenditure that ought not to appear, or any point that would lead to expenditure larger than that which has been estimated.

2895. Mr. *Norwood.*] You would be very much surprised if by this time next year it was ascertained that the Government would have to pay more than 6,000,000?—Extremely.

2896. It is your clear opinion that it would be within the 6,000,000?—I believe so.

2897. Sir *Frederick Heygate.*] Perhaps a good deal less?—I hope so; it depends upon the arbitrator.

2898. Mr. *Goschen.*] Have you examined into the question of the difference between the original estimate of two millions and a half, and the present estimate of within 6,000,000?—No, I have not.

2899. Are you surprised, as an officer of the Treasury, to find that it has run up from two millions and a half, to something that might be called 6,000,000?—I have not sufficiently gone into the facts of the previous estimate.

2900. *Chairman.*] The previous estimate was examined by Mr. Anderson?—Yes.

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2901. Mr. *Norwood.*] The data of the former estimate are different from the data for this, as I understand?—I believe there are more companies in this.

2902. At any rate, the data are different?—Yes.

2903. Mr. *Goschen.*] You do not know the data of the old estimate?—No.

2904. *Chairman.*] Have you read Mr. Scudamore's report in that Blue Book?—Some months ago, my impression is, that the number of companies to be purchased at the time he wrote that report was not the present number.

2905. Do you remember that he did not propose to deal with Mr. Reuter?—I recollect that.

2906. Do you also remember that there was nothing with respect to the purchase of perpetual way-leaves from the railway companies?—I recollect there was nothing of that kind.

2907. Do you remember that there was nothing in that estimate referring to the purchase of Railway Companies' property at all?—Yes.

2908. Do you remember, that it had reference to the purchase of the undertakings of the four principal Telegraph Companies?—Yes; I was not sure whether it was three or four.

2909. Mr. *Goschen.*] The subject of the railways was mentioned in that report, was it not?—I think so, but my recollection is not very clear upon the point.

2910. You do not very clearly recollect what was said with regard to railways?—No, I do not clearly; it is some months since I read the report, and I have had so little spare time, that I have not had time to look it up since.

2911. Mr. *Leeman.*] When was it that you examined the former data?—I never examined the former data.

2912. I understand you to say that you looked over them generally?—I read the report, that is some months ago.

2913. Was it subsequently to Mr. Anderson making the report to the Chancellor of the Exchequer?—I think it may have been about that time.

2914. Was it before the Bill was proposed to be read a second time?—Certainly; it was about February.

2915. Did you look at the report with a view to the Bill going before the House of Commons for second reading?—I merely read it from curiosity; it did not come before me officially at all, I merely read it as any one of the public might have read it.

2916. Upon what data it proceeded, you did not know?—Not officially.

2917. So that any comparison now with the data upon which that proceeded, you cannot form?—No.

2918. You have had the data put before you upon which Mr. Scudamore proceeded?—Yes.

2919. Without asking you for the details of the data, have you any objection to tell us now what are the heads of the data?—With regard to the 6,000,000 *l.*, I have taken the existing rights at 20 years' purchase, and the doubtful and prospective rights at as nearly as I could judge what the arbitrator would award.

2920. What is the present mileage of the telegraph wires?—I have no detail here with me. I have carefully gone through Mr. Scudamore's estimates and checked them.

2921. Surely you can tell me how many miles of wire you have been dealing with?—No; I checked all the estimates with Mr. Scudamore's papers; he could give you information upon it, and show you what I worked upon. I have not taken out the mileage separately.

2922. Have you taken out the number of miles of wires which are upon existing railways?—I have not.

2923. You do not know the number of miles of wire existing now upon railways?—No.

2924. Do you know the number of years over which the interest of the Telegraph Companies in the wires extends?—I have seen a statement of that kind.

2925. Do not you know the number?—No; I have not the paper by me; it is Mr. Scudamore's paper.

2926. Mr. Scudamore has the paper, has he, with the number of years' interest the Telegraph Companies have in the wires that are now on railways; have

have you seen such a statement?—I have seen such a statement, showing the number of years which the present agreements with the railways are to run.

2927. Throughout the country?—Yes.

2928. Can you give the Committee no idea of the average number of years' leasehold interest that the Telegraph Companies have now in the entire mileage?—I should think less than 10.

2929. You have already said that you have calculated 20 years' purchase upon that interest?—Upon the existing revenue of the different companies, the net revenue.

2930. Having regard to what you have said, that the average interests of the Telegraph Companies in the wires as they now exist upon the railways, is only 10 years, I ask you, as a Government officer, is that 20 years' purchase upon such an interest a provident purchase upon the part of the Government?—What I thought you were alluding to was the purchase from the Railway Companies of their rights.

2931. No, I have not come to that. You have said that the Telegraph Companies have only 10 years' interest in those wires which are now laid along the railways of this kingdom; I ask you whether an arrangement to give 20 years' purchase upon a 10 years' leasehold interest is a provident transaction on the part of the Government?—In the first place, it is only a small portion. The interest between the Telegraph Companies and the Railway Companies is not a large one either way.

2932. But you have already told me, whatever may be the extent of wires now existing on the railways of the kingdom, the whole interest which the Telegraph Companies have in the wires is 10 years, speaking on the average?—Yes; that is between the Telegraph Companies and the railway.

2933. Is that a provident agreement on the part of the Government to give 20 years' purchase upon the 10 years' leasehold interest?—There is the consideration that, if desired, there is not a question that the railways would continue the agreement.

2934. I ask you, as a general question, and as a gentleman who has come from the Treasury, do you say, on the part of the Government, that 20 years' purchase for a 10 years' leasehold interest in property of that nature is a provident arrangement?—The whole thing is included together, one interest with another.

2935. We will come to the other interest in a moment; this is an interest to be paid for separate and distinct from every other, is it not; the amount which the Telegraph Companies are to receive is altogether distinct from anything connected with the railways?—The Telegraph Companies will get upon their existing interest 20 years' purchase.

2936. Altogether distinct and unconnected with any arrangements with the Railway Companies?—Yes.

2937. Again I come back to my question. Will you say, as an officer of the Treasury, that you believe that that is a provident arrangement for the Government to make for a 10 years' leasehold interest of that description of property?—I am not aware that the Government would give for that species of terminable property 20 years' purchase.

2938. If they would, is it your opinion that it would be an improvident arrangement?—If the interests of the Telegraph Companies were only 10 years, I do not think that they would be entitled to 20.

2939. You have told us that you have ascertained that it is 10 years; assuming your information is correct, I again put this question: Is it a provident arrangement to give 20 years' purchase of a 10 years' leasehold interest in that species of property?—I do not think that would be a provident arrangement.

2940. If the Government has agreed to do so, is that what the Government, in your judgment, ought to have done?—Not to give 20 years for a 10 years' leasehold interest.

2941. That is part of the data upon which you have been proceeding?—It is a small part.

2942. But to the extent to which it goes; that is part of the data upon which your 6,000,000 is based?—A small portion.

2943. I am precluded from asking you what. Are you of opinion that that 20 years' purchase will be a small portion of the 6,000,000 of the Telegraph

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Companies' interest?—In the first place, I do not admit that 20 years will be given for that.

2944. You say that you do not think the Government will do it; but assuming that the Government does it, you say that would be only a small proportion; have not you informed yourself as to who the companies are who are to have the 20 years' purchase?—Yes, I have.

2945. Which are the Telegraph Companies who are to have the 20 years' purchase?—The Electric and International, the British and Irish Magnetic, the United Kingdom, and the London District.

2946. How many Telegraph Companies have you altogether that are to be bought, that are comprised within the 6,000,000 *l.*?—I have those that I have named, and certain of the submarine cables.

2947. Which of them?—There is Reuter's. Mr. Scudamore could give you the names of the others better than I can.

2948. You have a large number?—Not a large number.

2949. Eight or ten?—No; there is only one company, I think, that has two lines.

2950. You have the Electric and International?—Yes.

2951. The United Kingdom?—Yes.

2952. The British and Irish Magnetic?—Yes.

2953. And Reuter's?—Yes.

2954. The Universal Private Telegraph Company?—Yes.

2955. The London and Provincial?—I imagine that is what I have called the London District.

2956. You say you do not know the number of miles of wires which are now laid upon railways?—No, I do not.

2957. You do not know that there are 77,000 miles?—No, I do not.

2958. Do not you think that in checking data which was to be for the information of Parliament, that should have been a matter within your knowledge?—I do not see how it would affect the calculations which I was asked to check.

2959. Were you asked to check the amounts that would have to be paid first to the Telegraph Companies?—For the railway trades; I checked that.

2960. Were you asked to check Mr. Scudamore's aggregate amount to be paid to the Telegraph Companies, apart from everybody else?—Yes, upon the data which Mr. Scudamore supplied me with.

2961. Have you checked the aggregate amounts to be paid under the agreements with all the Railway Companies throughout the kingdom in respect of their interest as reversioners in the telegraph?——

Mr. *Sargood.*] I do not think that the witness has read the agreements; I do not see how he can have done it.

2962. *Chairman.*] You have been put in possession of the effect of the agreements with the Railway Companies?—Of the effect of them.

2963. You have not gone through the agreements verbatim?—No.

2964. But you have been put in possession of the points of the agreements, have you not?—No.

2965. You were obliged to go into that in order to check Mr. Scudamore's calculations?—Yes.

2966. Mr. *Leeman.*] Will you tell me what were the points which were put before you by Mr. Scudamore with reference to the Railway Companies?—I had given me their net proceeds, as far as they could be ascertained, upon each of the several railways which had those wires upon them.

2967. The net receipts, when?—During the last year.

2968. That is, to those who have the power of sending public messages?—Yes.

2969. Was that all that was put before you?—Yes.

2970. And in your estimate of 6,000,000 *l.*, that is all that you have comprised?—For that portion.

2971. With reference to railways?—Except way-leaves.

2972. Except the way-leaves, that is all you have comprised in the 6,000,000*l.*?—To the railways.

2973. You say except the way-leaves; what is the extent of way-leaves that have been given to you?—I may say that, with regard to way-leaves, there was a general statement put before me of all the railways, and the agreements, and the

the number of years that the agreements had to run, and there was a large surplus left on the 6,000,000 *l.*; upon that statement I could see clearly that the cost of those way-leaves would be far within the balance that remained.

2974. You mean, then, that your estimate in respect of the Telegraph Companies left a large margin between their amount and the 6,000,000 *l.*?—That the estimate for the telegraphs and the railway trades left what appeared to me ample to meet the cost of the way-leaves; I did not go minutely into that because it would have been a very long operation; you would have had to turn out upon every railway separately the mileage and the number of years that the agreements had to run; I had very little time to go through it, and it appeared to me, taking a general view of it, that it was perfectly clear that the balance left was sufficient to meet the cost.

2975. Then it was only a general view that you took with regard to the way-leaves of the railways?—Yes.

2976. Would not the precise term of lease be most important in considering that question. Supposing you have a short lease for the London and North Western, and a long one for a short railway, would not that make all the difference?—To the individual railway certainly, but as a whole I considered it was not important. I could sufficiently judge that there was margin sufficient for it.

2977. Have you calculated the value of the reversions in all those Railway Companies at the end of 10 years?—No, not separately.

2978. First of all, generally have you made any calculation of the value to the Railway Companies of the power they have themselves at the end of 10 years to work their telegraphs for the public?—No.

2979. That is not an element that would enter into your consideration?—I did not calculate it.

2980. Looking at it as a financial question, do you suppose all the railways in the country, having power to work their telegraphs at the end of 10 years, but for this Bill, will not put a very large sum in respect of that reversion with the power they would have to work the telegraphs for the public?—I do not think it would be of very great value in the first place, and in the next place it would be a deferred value for 10 years, which would very much diminish it.

2981. How many years' purchase would you put upon the reversion, having put 20 years' purchase upon the 10 years' lease?——

At the suggestion of the Chairman, Mr. Leeman withdrew the question.

2982. Is not the value of the Railway Companies' reversion in the railways one of the matters which on those agreements put before you by Mr. Scudamore, the Government is to pay for?——

Mr. *Sargood.*] I submit that we ought not to be prejudiced by a question of that sort.

2983. Mr. *Leeman.*] At all events whatever it may be, large or small, the question of the value of the reversions to the Railway Companies in the posts and wires, is not comprised in the 6,000,000 *l.* which you come here to confirm?—No, I believe not.

2984. Have you seen the clauses which are proposed to be put into the Bill, as between the Postmaster General and the Railway Companies?—No.

2985. Allow me to read this to you, "the Postmaster General shall pay the Railway Company the following sums, by way of compensation. Twenty years' purchase of the amount of the whole receipts (if any), of public telegraph messages received and forwarded over the wires belonging to or rented by the Railway Company, reckoned on the basis of the receipts derived therefrom, over a continuous period of six months, prior to the acquisition by the Post Office of the business of the Electric Telegraph Company;" was that within your estimate?—I was given the amount of net receipts of those companies, and I calculated those net receipts that were given to me at 20 years' purchase.

2986. That is comprised within your 6,000,000 *l.*?—Yes.

2987. That is those companies who now forward public messages?—Yes.

2988. "Twenty times the amount of the estimated annual increase, calculated upon the average increase of the preceding three years of the said receipts from telegraphic messages, including new lines and new stations on existing lines;" did you comprise that?—I think you had better ask Mr. Scudamore if those

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figures are included in what he gave me as the net receipts; I have taken the figures he gave me.

2989. You have not seen these clauses?—No,

2990. Therefore whether you included 20 years' purchase upon the average increase of the preceding three years, you do not know?—I am not aware whether I included those figures or not.

2991. How did you test data of that description so given to you?—I could only take those figures as given to me from information, which Mr. Scudamore showed me as being derived from the Railway Companies.

2992. Any further data than that you had not?—I had not.

2993. "All rents and annual or other payments payable to the Railway Company by public Telegraph Companies during the still unexpired periods embraced in their respective agreements, and at the terms mentioned in said agreements;" did you see those?—Is that for the way-leaves?

2994. For anything. You are aware, are you not, that there are amounts paid to Railway Companies for many things beyond way-leaves?—Not particularly; it has not been my duty to go into the question of this Bill; I was only asked to check the figures and computations, and see whether I agreed with the computations upon the data furnished to me.

2995. Are you at all aware whether the rents and annual or other payments payable to the Railway Companies by public Telegraph Companies, were put before you?—Whether they were included in those receipts or not, Mr. Scudamore could explain.

2996. You did not test those?—I had no means of testing them.

2997. "Such sums as shall be agreed upon, or in default of agreement, as shall be settled by arbitration, in respect of the loss by the Railway Company of the privilege of granting other way-leaves and making future arrangements with telegraph or other companies, and in respect of granting a monopoly to the Postmaster General for the conveyance of telegraphs over their railways as herein provided for." You have told us that you did not put a shilling upon that; that is the reversion?—As regards present way-leaves, not as regards future way-leaves.

2998. Not as regards the future way-leaves that will arise after the termination of the present leasehold interest?—No.

2999. Take the next, "Such sums as shall be agreed upon, or in default of agreement, as shall be settled by arbitration, as the value of the Railway Company's reversionary interest in the telegraph receipts from public messages on the expiration of the agreements with the respective Telegraph Companies, as well as the amount of the sum payable to the Railway Company in respect of the estimated increase of revenue from public telegraph messages on such sections of the line." Did you take anything of that sort into consideration?—As I said before, Mr. Scudamore could state whether that is included in the figures he gave me.

3000. You have no recollection of any such thing being put before you?—Only those figures which Mr. Scudamore put before me; he can better explain what he included in those figures than I can.

3001. "And in determining the sums payable to the Railway Company under this agreement, the arbitrator or umpire shall have regard and take into view the results of the experience of the Railway Company and the Telegraph Companies in working the telegraphs for the public on such portions of their line as they have so worked;" did that enter into your consideration?—I can only repeat the same answer.

3002. "Such sums as shall be agreed upon, or in default of agreement as shall be settled by arbitration, for the loss occasioned by removal of any clerks now provided by the Telegraph Company, and for any extra cost which the Railway Company may incur in working their telegraph for railway purposes as a separate system;" did that enter into your consideration?—I did not see that I have anything for compensation for removal of clerks.

3003. Nor have you put anything for the extra cost which the Railway Company would be put to by the loss of the present telegraph clerks, have you?—I am not aware.

3004. If you have not, does not it occur to you that that is a very important element in considering the future amount of working expenses?—I should think that the amount would be extremely small.

3005. That

3005. That is as to compensation; but with regard to the extra cost of working the telegraphs in future, did not Mr. Scudamore put before you the fact that at this moment a very large portion of the telegraphs is done by railway clerks under agreements. Would not that necessarily be a large item in considering the future expense of working the telegraphs?—It would be a part of the expense, no doubt.

3006. Did that enter into your consideration?—I imagine that it is not included here.

3007. "The Postmaster General shall transmit to their respective destinations all messages of the Railway Company in any way relating to the business of the company between any foreign stations in the United Kingdom free of charge." Did you put any value upon that; was that one of the heads of your data?—I think Mr. Scudamore could give you much better information than I can upon that point. I have taken certain figures he has given me for granted.

3008. You have no recollection of those figures being given you?—Whether they were included in the sum given to me, or not, I do not remember.

3009. You testing, as a Government officer, for the information of Parliament, the figures Mr. Scudamore put before you, I ask you, in that public capacity, whether you did not consider it your duty to have tested those by going into the details?—I tested the figures that were put before me by Mr. Scudamore on the main points, and I was obliged to accept in some cases information which he gave me, and with regard to the railways he gave me certain figures as being the net revenue which would have to be bought up. And what he has included in that or not I really am not prepared to say, it is a small portion of the whole; and as there was a considerable margin, and as I had no means of testing the minutæ, I accepted what was given to me in that case.

3010. Before I proceed to the next head of what is to be arbitrated upon, I again put to you this question, assuming that the Telegraph Companies had, as you say, absorbed a very large part of the 6,000,000 *l.*; do you still say that you consider 6,000,000 *l.* is a safe estimate?—I do, quite safe.

3011. Notwithstanding what I have called your attention to?—Certainly; I think those points are small points that will not materially affect the estimates; but the excess of estimate upon the other side is quite sufficient to meet any small thing of that kind.

3012. Was this in your mind: "On such acquisition as aforesaid the Postmaster General shall, as herein provided, have a perpetual right of way for his poles and wires over the whole of the Railway Company system, and in consideration thereof he shall pay to the Railway Company such sum per mile per wire over the whole of the said system, by way of yearly rent, as shall be determined by agreement between the parties, or failing agreement, as shall be fixed by arbitration; and the arbitrator in determining the amount to be paid to the Railway Company during the period of existing agreements shall have regard to the agreements which subsist between the Railway Company and any Telegraph Company, and also to a compulsory sale being required from the Railway Company"; did the question of compulsory sale enter into your consideration?—Certainly.

3013. *Chairman.*] With regard to the terms of purchase of the interests of the Telegraph Companies in taking 20 years' purchase, no allowance was made for prospective profits; it was 20 years' purchase of last year's profits?—Yes.

3014. So that no allowance was made for prospective profits?—None whatever.

3015. Are you aware whether the profits have not been largely increased from year to year?—Undoubtedly they have, rapidly.

3016. Then with regard to leases which the Telegraph Companies have from the railways, did you not take into consideration that those leases were renewable, and would, as a matter of course, be renewed upon terms to be arranged?—I took for granted that the Railway Companies would renew the leases; they found it advantageous to do so before, and there is no reason to suppose they would not again.

3017. No one treating it as a matter of business would suppose that the interests of the Telegraph Companies would come to an end at the expiration of the then lease?—No.

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3018. And in some cases the leases extend to 99 years, do they not?—I am not aware of that.

3019. In considering what the terms of purchase should be with the Telegraph Companies, was not regard had to the actual price that the share then fetched in the market?—Yes, that was one of the considerations.

3020. Was not it considered that, if the matter went to an open arbitration, the arbitrator would take the actual price the charges fetched in the market, and would add something for prospective profits?—For prospective profits and for compulsory sale.

3021. Was not it taking all those matters into consideration, that the 20 years' purchase was agreed to?—Yes.

3022. With regard to the Railway Companies and their interests, do you apprehend that we shall have to pay for the same thing twice over under these agreements?—I hope not.

3023. You do not take the view that we shall have to pay the Railway Companies and also the Telegraph Companies for the same thing?—No.

3024. Do you apprehend that the Railway Companies could, without an Act of Parliament, become Telegraph Companies?—I should think it extremely unlikely that the law would admit that.

3025. And in those terms to be given for the way-leaves we are to buy the perpetual and exclusive way-leaves, are we not?—I believe so.

3026. I suppose you consider the terms to be given to the Telegraph Companies are liberal terms?—Liberal and fair.

3027. Do you think, in the case of a purchase which is in the nature of a compulsory purchase, you could give other than liberal terms?—No one would accept them unless some advantage was to be gained from it.

3028. Do you think, if the matter had gone to open arbitration, the arbitrator would not have given less or much less than the terms agreed upon?—I do not think that he could well have bound them down to much lower terms.

3029. Mr. *Leeman.*] Are you aware of the relative population of this country and France?—Pretty well.

3030. Am I right in saying that the population of France is 37,000,000?—I should think it might be.

3031. And that the population of the United Kingdom is 30,000,000?—That is about the thing.

3032. Do you happen to know what the entire telegraphic communication of France has cost their Government?—No, I do not.

3033. Do you know, first of all, that they have 68,000 miles of wire?—Yes.

3034. And the United Kingdom 77,000 miles of wire?—I have not investigated that.

3035. Would it surprise you to learn that the entire cost of the French telegraphs of 68,000 miles of wire has been under 1,000,000 *l.* I take that from the papers of Mr. Scudamore, which were put into your hands, I presume?—No, I have not seen them.

3036. I understood that you had the data upon which you were to calculate to see whether his estimate of future revenue was well founded?—I have gone upon certain evidence he gave, which evidence, as far as it was shown to me, did not go into the telegraph of foreign countries.

3037. Did you not hear Mr. Scudamore base his estimate of future revenue upon Belgium and France?—I was not present during his examination.

3038. Would it surprise you to learn that France has made the whole of its telegraphs, consisting of 68,000 miles of wires, at a cost of under 1,000,000 *l.*, for which you now say this country is to give 6,000,000 *l.*?—I do not know what that includes.

3039. It includes 68,000 miles of wire, and it includes a submarine wire. France 20,028 miles of line and 68,687 miles of wire (at a cost of 23,800,791 francs, equal to 952,031 *l.* 13 *s.*); equal to 47 *l.* 1 *s.* 8 *d.* per mile of line, and 13 *l.* 10 *s.* 4 *d.* per mile of wire. This item includes the construction of 354 miles submarine lines, and 884 miles semaphore with 1,310 miles of wire?—It would depend upon so many things; it would depend upon how the work was done, whether the material is as good as ours, whether it includes instruments, and how the accounts are made up. I should not like to give an opinion upon it without a very close investigation of all the accounts. It is a question as to the mode in which the work is done.

3040. As a Treasury officer, taking care to inform your Government upon matters of this description, and as a witness coming here to confirm this estimate, would you consider that this country, for 77,000 miles of wire, was acting prudently in giving 6,000,000 *l.*, when for 68,000 miles of wire, France had to pay but 952,000 *l.*?—There are so many elements to be gone into that I hesitate to give any opinion upon it. It would always depend upon whether the work was as well done, whether the posts were as durable, and whether the wire was as good as ours. No doubt labour in England is more expensive than on the Continent.

3041. You see what it has cost per mile of wire?—Theirs may be a very poor wire.

3042. You see that it has cost 13 *l.* 10 *s.* 4 *d.* in France?—I have no knowledge at all whether that would be cheap or not.

3043. You have been testing Mr. Scudamore's data of future working expenses?—I have not gone into the question of the cost of wire in the remotest degree.

3044. The state in which you find the posts and wires would enter largely into the question of what it would cost?—I have heard it stated in evidence that in England they are in first-rate condition, and therefore I take it for granted that that is so.

3045. Take the cost of maintenance of wires in France?—It is 5 *l.* 4 *s.* 8 *d.*, according to this paper.

3046. Have you ascertained the cost of maintenance in England?—No.

3047. How then are you able to check this data?—I was not asked to check the state of the lines, whether they were in a good or bad condition, or at what rate per mile a telegraph wire could be worked. I only had a few hours to do it; it would have taken me weeks to have gone into all that. What I did was to go through Mr. Scudamore's statements and see that the calculations were correct, and, as far as I could form a judgment from the data supplied to me, that it was a reasonable and moderate estimate; as to working the telegraphs in France, or anywhere else, I have not looked into that question.

3048. Upon the data supplied to you for you to come and confirm the estimate of Mr. Scudamore for the information of Parliament, surely it was necessary for you to go into these matters?—I think not; I was asked to check the computations, and the computations were founded upon the accounts of what it has at present cost the Telegraph Companies to carry on the duties entrusted to them.

3049. A good deal of the question of cost would depend upon the concentration of the telegraphs, would it not?—I have no doubt that 10 lines on one set of posts could be worked much more cheaply than one line on 10 sets of posts.

3050. Will you take this from me on this document of Mr. Scudamore's, that of the gross receipts in the whole of France in 1866 one-third was received in Paris, that is 111,000 *l.*, one-third of the total receipts of the whole empire?—Yes.

3051. You were here part of the last day, were you not?—Yes.

3052. Did you hear it stated in the course of the examination, that day, that 75 per cent. of the entire receipts in England was obtained from 15 tons, and that of that about one half, or 37½ per cent., was received in London?—I recollect 75 per cent. I am not sure of the other figure.

3053. Mr. *Norwood.*] You have no knowledge of your own on these subjects?—Not the slightest, I was not brought here at all to give an opinion as to the cost of working.

3054. Mr. *Leeman.*] You were brought here for the purpose of confirming the data supplied to you by Mr. Scudamore; I am wanting to see what knowledge you yourself obtained of the data so supplied?—This is not data that Mr. Scudamore supplied me with.

3055. You have told the Committee already that you believe that the revenue upon which Mr. Scudamore was basing his estimate would be realised?—Taking the accounts which were laid before me of the several Electric Telegraph Companies, I think it is a very reasonable estimate to suppose that the revenue he states will be realised.

3056. If you tell me that you have no knowledge whatever upon the subject I will not pursue it?—I have no knowledge whatever of telegraphy, or of the cost of working.

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3057. But you have stated to the Committee that you believe the revenue which Mr. Scudamore has put before the Committee will be realised?—Yes.

3058. Mr. *Norwood.*] Does not it really come to this, that you are at the head of the Financial Department of the Treasury, and you have been requested by the Chairman of the Committee to examine certain figures of Mr. Scudamore?—Exactly, and I have examined those figures.

3059. And you declare that those figures are correct?—That the computations are correct.

3060. Mr. Scudamore has laid before you accounts of four Telegraph Companies, which have given you a certain amount of figures upon which you have been able independently to work, and you have ascertained satisfactorily, as far as those figures go, the probable amount that may have to be paid to those Telegraph Companies?—That was all I was asked to do, and all I have attempted to do.

3061. You find that there is a considerable margin between the capital amount you have arrived at and the 6,000,000 *l.*?—Yes.

3062. In your judgment that surplus is of such an amount that it ought to cover the other contingent matter with reference to railways and other things?—I think there would be an ample margin to cover that.

3063. You are not here as a gentleman who has studied the whole question laid before this Committee with regard to telegraphy, and the desirability of the Post Office purchasing the telegraphs?—I have no knowledge whatever of the subject beyond what was put into my hands to check.

3064. You only come here as an actuary to state that certain figures appear to you to be correct?—That was all I was asked to do, and all that I expected to be asked about.

3065. Mr. *Graham.*] Your estimates are based so far upon the published statements of the Telegraph Companies?—Upon the public accounts of the Telegraph Companies, and to a small extent upon certain information that Mr. Scudamore was supplied with by the railways, which he gave to me.

3066. You have no personal knowledge of the correctness, or otherwise, of the accounts furnished by the Railway Companies on which your estimates are founded?—Nothing more than that I have seen the printed statements.

3067. Supposing those printed statements are in any respect incorrect, that would be a matter for the arbitrator's consideration?—Certainly.

3068. *Chairman.*] You have been asked about the cost of putting up the existing wires and poles, in considering whether it is a prudent purchase on the part of the Government; is it not more to the point to consider what revenue would be brought, than to consider what the original cost of the undertaking has been?—Certainly.

3069. Mr. *Turner.*] With respect to the 10 years' leasehold, supposing the concerns had 10 years on the average to run, and there was a profit of 10 per cent. beyond the amount that would be necessary to pay the interest upon the purchase money, would not the capital at the end of the 10 years be recouped?—Certainly.

3070. Therefore, if there was an average of 10 years to run, and there was an increase of profit equal to 10 per cent. per annum (and, in fact, it would go on increasing in subsequent years; it would be compound interest), the Government, at the expiration of 10 years, supposing there was fair ground to expect that that increase would be realised, would have the concerns for nothing?—Yes, provided that there was that excess of revenue.

3071. Evidence has been given that there is a probability that that would be the case; have you considered that question at all, whether there is a probability that the revenue would increase at the rate of something like 10 per cent. per annum?—I think it is very probable that it would.

3072. Supposing that to be so, then, at the expiration of 10 years, the purchase money would be recouped?—Yes.

3073. Therefore, it would not be so bad a purchase?—Exactly.

3074. Of course, in a case of this kind as with respect to the penny postage, you must go a great deal upon probabilities?—A great deal must be estimate formed from mere judgment, as well as you can, based upon the past transactions of the companies you are purchasing, and similar events in other cases, like the Post Office or the Money Order Office.

3075. Taking those matters into consideration, do you think it is likely that there

there would be an increase equal to 10 per cent., or something like it?—There would be a large increase; I have no doubt it would be considerable.

3076. Mr. *Leeman.*] Your assumption of the future revenue starts, I suppose, from Mr. Scudamore's figures?—Founded upon the accounts of the companies during the past year.

3077. And only on the accounts of the companies of last year?—And reckoning an increase in future years.

3078. Had you these two documents before you (*handing to the Witness the papers handed in by Mr. Scudamore on the 9th of July*)?—Yes, I had the printed copy before me.

3079. You have examined the accounts of the Telegraph Companies up to the end of 1867?—For the year 1867; not up to the year 1867.

3080. You did not examine the accounts of previous years?—No, I did not.

3081. Would you have the goodness to give us what the precise number of messages was (for you ascertained it, no doubt) at the end of 1867?—I was given that as being 6,000,000; I have not collected it from the different companies; that was data given to me to work upon.

3082. That 6,000,000 was at the end of 1866?—Yes.

3083. Did not you inform yourself as to the actual number of messages in 1867?—No.

3084. Then that is an estimate?—The point at which the estimate starts is the 6,000,000.

3085. You had the figures, and could have started from actual figures?——I do not think that the number of messages was in the account shown to me.

3086. You do not know what the actual number of messages was at the end of 1867?—No.

3087. You see there, that with regard to the 55 per cent. of future messages, which are to be at 1 *s.*, no addition is made?—No.

3088. And you are aware of the reason given by Mr. Scudamore for that?—Yes, because there would be no reduction.

3089. It is assumed that that will remain stationary?—Yes.

3090. The next item there is 2,250,000 messages; did you investigate that?—No, I had no means of doing so.

3091. So that whether Mr. Scudamore is right in assuming that that 2,250,000 messages will rise to 4,050,000, you have no means of knowing?—It is an estimate which you can only judge of by parallel cases; it appears that the increase in other cases was so rapid after the reduction was made, that as far as one can judge, Mr. Scudamore was justified in assuming that such a reduction would produce such an increase.

3092. That is that a reduction of 33 per cent. from 1 *s.* 6 *d.* to 1 *s.*, in fact would increase the number by 80 per cent?—Yes.

3093. And you assume that from some other case?—I saw that in other cases the increase had been larger.

3094. What was that other case?—Mr. Scudamore has the paper which he made for me.

3095. Surely you tested it?—I accepted that as a true statement which he showed me.

3096. Of what had been in some other case?—Yes.

3097. And you do not know what that other case was?—One case, I believe, was a reduction that had been made on a previous occasion in one of the companies, and another case was a reduction in some foreign country.

3098. Mr. *Norwood.*] You took those papers as the data themselves; you did not go into the justification for them?—I had Mr. Scudamore's evidence generally, which goes into a great many different points.

3099. You did not take independent means of investigating the figures?—I did not take independent means of investigating the facts at all. I saw all the instances brought forward, and as far as I could judge it struck me that his supposition that there would be that increase was a reasonable supposition.

3100. Mr. *Leeman.*] You are here as a special endorser of Mr. Scudamore's statement?—Only according to the data placed before me.

3101. You have told us that you assume his data; I am wanting to see whether the data which you are assuming can possibly be correct; I ask you what

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the country is to which you refer?—I refer to the evidence which Mr. Scudamore gave before this Committee, a copy of which he placed in my hands. There were a great many cases referred to, all of which led me to think, as far as I could use my judgment, that his estimate was a reasonable one.

3102. Before you come to a conclusion that his estimate was reasonable, and that he should increase by 80 per cent. the present 1 *s.* 6 *d.* messages, you would of course learn what the country was to which you say he referred you as a justification?—I can go through the different points.

3103. Does it not occur to you that it was important for you to have discovered the analogy between the country to which he pointed your attention in his evidence and England; would not that be a matter which you should have considered, before you come here to endorse the accuracy of his judgment?—I considered that it was my duty to use my best judgment upon the evidence that he laid before me, and to say whether I thought he had formed a reasonable conclusion.

3104. Do you recollect what the amount per message is in the country to which he referred you?—He says that in Belgium a reduction of 33 per cent. in rate produced an increase of 80 per cent.

3105. Is Belgium the country which you take, then?—I take the evidence as a whole.

3106. For the purpose of arriving at the conclusion that two millions and half of messages now at 1 *s.* 6 *d.* when reduced to 1 *s.* will be increased by 80 per cent., do you take Belgium as the country where similar results have followed a similar reduction?—Partly.

3107. Do you happen to know the rate of postage in Belgium at this minute?—I believe it varies according to distance, but I have very little knowledge upon the matter.

3108. It is higher than in England, is it not?—I was not aware of it; I thought in some cases it was a halfpenny, but I have no knowledge upon the subject.

3109. You do not know that the postage of Belgium is 2 *d.*?—No.

3110. Supposing the postage of Belgium is 2 *d.* and the rate for a telegram is 5 *d.*, the analogy fails does not it; the use of the telegraph at 5 *d.* when you pay 2 *d.* for a letter, and the use of a telegraph at 1 *s.*, when you pay 1 *d.* for a letter, does not present to you much analogy, does it?—I think the contrast in Belgium between 5 *d.* and 2 *d.*, might not be so strong as the contrast between 1 *s.* and 1 *d.* in England.

3111. The weakness of the contrast would be in the proportion I put it, would it not?—No; because the use of the telegraphs depends more upon the convenience than the price.

3112. Mr. Scudamore, in that document which he put into your hands, assumes that because the telegraphs have been reduced to 5 *d.* in Belgium, therefore a reduction from 1 *s.* 6 *d.* to 1 *s.* here will induce an increase of 80 per cent.; is that the basis upon which he proceeds?—That is only a part of the basis.

3113. Does it not occur to you, as a gentleman versed in figures, that the use of the telegraph, after the reduction of 5 *d.*, may very well have been increased, when the post would have cost you 2 *d.*?—It is an element to be considered.

3114. It is a very different thing to the use of the telegraph for 1 *s.* when a letter goes at 1 *d.*?—I consider that it is an element to be considered.

3115. Now take France; was France put to you as a case?—France is stated in the evidence of Mr. Scudamore.

3116. Do you know the state of postage in France?—I believe there are different rates of postage in France.

3117. It is not 1 *d.*?—Five centimes, I think, is the lowest rate.

3118. It is not the uniform 1 *d.* rate of England?—No, it is not the uniform 1 *d.* rate of England.

3119. The halfpenny is for six miles, is it not?—I would rather not give any evidence upon that.

3120. Do you know that the rate of postage in France rises with the distance?—I believe it does.

3121. Do you know anything about the rate of postage in Switzerland?—I have very little knowledge of the postage abroad.

3122. When you come here for the purpose of stating that you confirm the accuracy

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accuracy of Mr. Scudamore's estimate, are not those matters which are important to be considered before you confirm that estimate?—I go upon the evidence as a whole, and taking it as a whole, even considering that there are certain elements in one or two points which would require close consideration, if you were making your estimate upon those points, I think he gives sufficient ground to lead one to think that his estimate is not an excessive one.

3123. Are you aware that he has first of all doubled the 2 *s.* messages?—I think those are from 200 miles to any distance. I think that is an extremely moderate estimate; my belief is, that there would be a very much larger increase upon that item.

3124. Did you go at all into the proportions in France and those other countries?—No, I did not.

3125. Not the proportions received at concentrated points, like Paris, for instance?—No, I did not.

3126. You did not ascertain how much of the gross receipts in Belgium were due to Brussels?—I have not gone into questions of foreign telegraphs.

3127. Nor did you go into the modes in which the post is now conducted in Switzerland?—No.

3128. If you did not, how are you enabled to confirm the statement here, that there would be 11,673,750 messages, instead of 7,500,000 that go now?—I cannot confirm it more than saying this, that from all the evidence laid before me, I think it is a moderate estimate, and especially with regard to the 2 *s.* rate for 200 miles and upwards, I think it is far below what the result will show.

[The Witness withdrew.

Frank Ives Scudamore, Esq., called in; and further Examined.

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3129. Mr. *Leeman.*] CAN you tell us what are the postages on the Continent?—In Belgium the postage varies according to distance; it is 1 *d.* within a certain range, and 2 *d.* within a greater range. On the average throughout the country it would be less than 1½ *d.*

3130. What is the range of the lowest?—Nineteen miles.

3131. Nineteen miles at 1 *d.*?—Yes, and 2 *d.* above 19 miles. I have not got the papers with me, but I have seen the proportions of the correspondence, and there is such an enormous preponderance at the 1 *d.* rate, that I have no doubt that the average is less than 1¼ *d.*

3132. What is it between Brussels and Antwerp?—I do not know the distance.

3133. What is the distance between Brussels and Ghent?—The distance between Brussels and Ghent, I presume, is over 19 miles.

3134. Between Brussels and Liége?—I presume the distance there would be also 19 miles.

3135. Between Brussels and all the mining districts of Belgium?—I dare say the distance may be more than 19 miles, but it is not 19 miles between each of those places and each other.

3136. Can you tell me the proportion of the gross receipts for telegrams in Belgium that is received within the range of Brussels?—A very large proportion of course, it always is the case; it is the same with the Post Office.

3137. What are the gross receipts in Belgium from telegrams?—The gross receipts in 1867 appear to have been a million francs.

3138. Does that include the foreign?—Yes, that included the foreign. I can give the inland separately; the inland was only 470,000 francs.

3139. That would be in English money how much?—Not 20,000*l.*

3140. The receipts by the Belgium Government for telegrams passing through Belgium largely exceed the receipts for internal messages?—No, not passing through Belgium; international and transit.

3141. The receipts from those two descriptions of telegrams exceed considerably the receipts from inland messages?—Roughly, the inland messages are four-tenths of the whole.

3142. Are the working expenses of Belgium inland and international messages amalgamated?—No, the Belgians work them out separately; they have printed the separate amounts in this report.

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3143. The longest distance which you can send a telegram in Belgium is 160 miles, is it not?—About that.

3144. For 160 miles they have now reduced it to 5*d.*?—Yes.

3145. For above 19 miles the posting of a letter costs 2*d.*?—Yes.

3146. For any distance in England you have a letter for 1*d.*?—Yes.

3147. And you propose that there should be no lower charge than 1*s.* for telegrams?—At starting that there should be no lower charge than 1*s.*

3148. Where is the analogy, then, may I ask, between the cases of the two countries which justifies you in supposing that a reduction of 80 per cent. will take place in England, where it would be the difference between 1*d.* for a letter and 1*s.* for a telegram, and Belgium where for a distance of 19 miles the charge is 2*d.* for a letter and 5*d.* only for a telegram?—The reduction I cited in the case of Belgium was not a reduction to 5*d.*, it was the reduction to 10*d.*; it was the reduction that took place in 1863 from a franc and a half to 10*d.*

3149. Did you not tell the Committee that the reduction from a franc to half a franc had had a very material effect upon the number of telegrams?—Yes, undoubtedly, I did; that was on the first day of my examination.

3150. Then, again, I repeat my question, does your 80 per cent. of increase, that is to say, an increase from 2,250,000 up to 4,050,000, proceed from the 80 per cent. increase which took place in Belgium?—Upon the increase that was produced on the reduction from a franc and a half to 10*d.*, and, let me add also, as a set-off in the difference of postage, that I have made no allowance whatever for the greater business activity of this country and the greater amount of education that prevails generally in this country.

3151. Am I right in assuming that the proportion of telegrams sent in Brussels, as compared with the whole of Belgium, is about the same as in England and in France?—That is more than I can tell. I should be inclined to think, from the circumstances of the French rate, that the large towns in France have a larger proportion than in Belgium.

3152. Mr. Foster has told us that, of the entire amount received in France for telegrams, one-third is received in Paris?—That is in support of my case; the rate varies with the distance in France as in England, and wherever the rate varies with the distance for telegrams, the greater proportion of the messages is sent on the short circuits, and the greater proportion of the receipts is collected in the large towns.

3153. Is not a uniform rate about to be adopted in France?—No.

3154. What is it now?—Two francs from any part of any department to any part of any other department, and one franc within a department; those rates are coming down to a franc and half a franc respectively; the rate will still vary with the distance, only it will be half the rate it now is.

3155. Do you believe that the amount of revenue will be in the same proportion, whatever the figure may be, as it has been, relatively?—No doubt a reduction to half a franc will largely increase the number of messages within a department, and therefore largely tend to increase the receipts taken at large towns. Where the receipts are uniform, and you give an advantage to all parts of the country, the more distant parts get a greater advantage and send a larger number of messages.

3156. Is the state of things in France at this moment this: that at 301 stations they collect 4*s.* a week?—It is quite possible.

3157. That at 179 stations they collect 6*s.* a week?—Quite possible.

3158. That at 185 stations they collect 12*s.* a week?—Yes; it is quite possible.

3159. That at 354 stations they collect from 1,000 to 5,000 francs, 2,500 francs being the average, about 100*l.* a year?—No doubt; I have no reason to dispute any of those figures.

3160. I have given you 1,001 stations that receive that amount of money; you have admitted, as I understand, that one-third of that is received in Paris?—That paper tells you so; I have no reason to doubt it, and I have no doubt it always will be the case.

3161. Is that the case at this moment in England?—Even if I had not been told so by the pamphlet of the Electric and International Company, I should have felt certain, from their rate varying with the distance, that the great part of the receipts would be collected on the short circuit; that is part of my case.

3162. Is

3162. Is not it the fact that of the 320,000 *l.* received by the Electric Telegraph Company there is only 20,000 *l.* received at nine-tenths of their stations?—Yes; and having offered so very little attraction to nine-tenths of their stations, that is the obvious result.

3163. You propose now to lay down wires to all those places which they have not been able to make pay?—Out of which they have not been able to get a dividend of 10 per cent.

3164. Do you believe that they could have got any dividend at all by going to those places?—I believe they would have got something out of them all, and I am quite sure we shall.

3165. Take the telegraph to Wick?—When first I came into this room I had not thought specially of Wick, but we have thought of it since. The line is open as far as Bonar Bridge. From Bonar Bridge to Dornoch and Wick is about 60 miles. A telegraph of a single wire would cost about 25 *l.* per mile; or if we take Mr. Culley's estimate, 30 *l.* a mile for two wires, that would involve an expenditure of 1,800 *l.* from Bonar Bridge to Wick.

3166. *Chairman.*] Is not it open to Golspie?—I have assumed that it goes only to Bonar Bridge. This line would directly serve at least seven money-order towns and villages, viz., Dornoch, Golspie, Brora, Helmsdale, Dunbeath, Lybster, and Wick, representing a population of about 25,000 inhabitants in that district, and an annual issue of about 5,000 money orders. If we could get as many telegrams as we get money orders (and I do not see why we should not do that in the peculiar circumstances of the district,) we should get, after striking off the 2 *d.* from the 1 *s.* 2 *d.* (the reason for doing which I will give presently) 250 *l.* per annum; a single line man at wages of 1 *l.* a week would keep the line in order, say 50 *l.* per annum; an allowance of 50 *l.* a year would probably suffice for small stores, renewals, and petty expenses, making 100 *l.*, and 5 per cent. on a capital of 1,800 *l.* would absorb 90 *l.*; so that after defraying all expenses, and paying a liberal interest on capital expended, there would be an annual surplus even in the first year of 60 *l.*; 2 *d.* I strike off the 1 *s.* 2 *d.* for the postmasters, who are to send and receive the messages; 1 *d.* for sending and 1 *d.* for receiving, would be a fair rate of payment.

3167. Your calculation has very largely proceeded, has it not, as regards your receipts in all these districts, upon the supposed analogy between the money order and the telegraph?—No.

3168. You say now that, assuming you could get a telegram for every money order, you would have the number of messages you speak of; who are the parties who now get money orders from you; first of all, let us divide it?—I say we have 5,000 money orders a year.

3169. To what places in that district is the large part of them due?—They are all along that line, and they are mostly money orders on the business of the fisheries.

3170. In truth, the district is partly a commercial district?—Yes; and for that reason would be very glad to use the telegraph.

3171. But take a district in which you have 60 miles to go which is no way commercial; do you mean that you anticipate that you will be able to justify an expenditure which the Electric Telegraph Company has not been able to justify; but, on the contrary, has considered it ought not to enter upon?—No doubt of it.

3172. Where is the analogy, in the case of an agricultural village, between a telegram and a money order; a man wants a money order for his wife or his children; does it necessarily follow that every man of that description will use the telegraph?—It follows that, when the means of using it is cheap, he will use it oftener than now.

3173. What for?—To communicate to his wife or children, or for the wife to communicate with the husband, and say, "Send me a money order."

3174. Do you represent, as far as the agricultural population of England goes, who have now the penny postage, that it is thirsting to send your 1 *s.* telegrams?—I have no doubt, from information I have received from all parts of the country, that the shilling telegrams will be largely used.

3175. Largely used by people who now use them?—Largely used by people who do not now use them.

3176. You say 55 per cent. of those who now use them are now paying 1 *s.*?—No; I say 55 per cent. of the whole number of messages are sent at 1 *s.*, but the

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people who send those messages would, no doubt, send an immense number of other 1 *s.* messages, if the rate on the long circuit was reduced.

3177. Why should they?—Why should not they; a man at Birmingham now telegraphs to Warwick for 1 *s.*, but if he wants to telegraph to Brighton or Exeter or away over the Channel to Belfast, he has to pay more than 1 *s.*; it is there where the increase would come in.

3178. Taking the 55 per cent. of the messages which are now sent at 1 *s.*, and looking at the 45 per cent. that remains, where is the population who are going to use the shilling telegrams, except in large towns, where they can send a letter for a penny?—Everywhere; and the further they are off the more telegrams they will send.

3179. As to Wick, you say that Wick is now a commercial place?—Yes.

3180. Dealing largely in fish?—Very.

3181. And as a consequence, Wick itself may require telegrams?—Not only Wick, but all the places along that line.

3182. They are all commercial people?—Yes.

3183. Supposing they were 10 miles inland, would not the question be different. Take another case not strictly commercial?——

3184. *Chairman.*] You did not choose Wick?—No.

3185. Who mentioned Wick first?—I think the honourable Member for York; I was going to refer to the case of Dunrobin Castle; the Duke of Sutherland lives at Dunrobin Castle part of the year, and during that part of the year when his house is full of guests, the telegraph would be enormously used; there would be pretty nearly as many telegrams during that period as from Wick all the rest of the year.

3186. Mr. *Leeman.*] How far would Dunrobin Castle be from your line?—A great deal nearer than from the present telegraph station. It would be very close to where the line would be; not a mile off, I should think.

3187. That is a part of what you expect to get as between Bonar Bridge and Wick?—Yes, that applies to all those apparently waste tracts at different times of the year.

3188. Mr. *Norwood.*] What is the time it takes for a letter to be delivered in London, supposing it is posted in Wick on Monday?—If it were posted late in Wick on Monday, it would not be delivered in London before Wednesday morning.

3189. Would not that be of itself a reason why the telegraph should be used?—Undoubtedly.

3190. Is not it the case that the greater the postal distance the more likely are telegrams to be required?—Undoubtedly.

3191. Mr. *Leeman.*] What is the distance from London to Wick?—I do not know, 600 miles perhaps.

3192. You are putting nothing on for the conveyance of a message from London to Bonar Bridge?—No, certainly not; we have got the line.

3193. Paying 6,000,000 *l.* for the lines, you do not calculate upon having anything to pay for the interest of the money?—Yes, I do.

3194. Is not that rather an important element in considering what you are to be paid for carrying a message to Bonar Bridge?—We shall have to pay the same interest whether we extend the system or not.

3195. You would not have the working expenses to Wick?—We shall have the clerks at the telegraph stations, who will not be materially damaged by having Wick messages in addition to those they have already got. As a rule the more messages you can get the cheaper you can work.

3196. You heard Mr. Weaver examined on Friday?—I had great pleasure in hearing him.

3197. Have you any reason to doubt the accuracy of the statements which were read to him by the Chairman?—I always thought they were accurate after a fashion, but that they had nothing whatever to do with the case.

3198. You heard Mr. Weaver state the loss the companies had sustained by carrying their wires to those remote districts; is that statement true?—That is more than I could tell you; my impression is, that anything they ever did in the way of extension merely went to diminution of dividend, or in the way of a temporary check upon dividend.

3199. You have read the book, I presume, in which the case of the Tele graph Companies is stated?—I read it with great pleasure.

3200. Do

3200. Do you mean that the statements made by those superintendents, with regard to those places, that would not justify the expenditure in putting up wires and posts, are all manufactured for the purpose of this case?—No; I have no doubt they are absolutely true, but all those statements were made with a qualification; when it was said that somebody would not be justified in going to the expenditure, what was meant was that the Electric Telegraph Company would not be justified in going to the expenditure with regard to their shareholders. When Mr. Weaver said that it was not desirable, he told you that he meant it was not desirable from his point of view.

3201. If you have 6,000,000 *l.* to begin with, and interest to pay on that capital, you have the same motive as the old companies, have you not, to see that whatever was done in the way of extension into remote districts, should be extensions that were likely to pay?—As we have not to pay 10 per cent. on the capital, but simply the interest that it costs us to raise it, we are not in the same position.

3202. You have the interest upon 6,000,000 *l.* of capital to begin with?—We have the revenue to cover that.

3203. What I wish to draw your attention to is this: do you believe that the statement of the Telegraph Companies that they would not have been justified in taking their telegraphs into those remote districts because they would not have paid them, is true?—I believe that is only true from their point of view, which Mr. Weaver explained was a shareholder's point of view.

3204. Is it true to this extent, that they could not have paid 10 per cent. dividend upon the amount; could they have paid any dividend upon the amount necessary to extend the posts and wires into those remote districts?—Yes, and I should think a very handsome dividend; no question of it.

3205. Is that your experience of the telegraphs in France?—I do not understand that the telegraphs in France require any dividend.

3206. But the telegrams now being carried in France according to the rates charged there, are an actual loss to the French Government, are they not?—No, they are not.

3207. Does not your paper say so?—If you will show me the passage I will tell you what the paper says.

3208. Does not your paper say this, that in France the receipts per mile of wire are 5 *l.* 2 *s.* 8 *d.*, and that the expenditure per mile of wire is 5 *l.* 4 *s.* 8 *d.*, leaving a loss of 2 *s.* per mile of wire?—No. In making that out they leave out of sight the enormous number of official messages which they send along the wires, and which they would otherwise have to pay for.

3209. Do not they say in the same return that the number of official messages is 6 per cent.?—Nearly 7 per cent.

3210. Six decimal eighty-one?—Yes; those they do not take into account.

3211. They do not take into account the 6 per cent., but they do take into account that the French Government is losing at this moment 2 *s.* per mile of wire?—I dare say that it is so.

3212. I have already pointed your attention to the fact that the French Government have 1,000 out of 1,200 stations that not only do not pay them a farthing, but upon which they are making a large loss?—I did not understand that; you gave me a number of stations taking only so much per week.

3213. Do you believe that a station taking 4 *s.* a week, of which there are 301, is not making a loss?—Most likely.

3214. Here are 179 stations making 6 *s.* a week; do not you believe that they would be making a loss?—I am ready to admit that there are a considerable number of stations making a loss.

3215. Seeing that there are 1,000 stations in France out of 1,200 making a loss, why should England differ from France as regards those remote places to which the telegraphs are to be taken?—Because of the greater business activity, the greater wealth, and the greater desire for social correspondence that exists in England as compared with France; we have a greater number of letters in proportion to each head of the population in England than in any country abroad; that shows the greater desire for correspondence one with another; that would tell in increasing the number of telegrams.

3216. Does not that involve this question; whether at this moment your letters are not mainly upon commercial matters, that is to say, your letters as far as regards their applicability to the question of the 1 *s.* rate. I ask you whether

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in respect of the 4,000,000 additional messages, the parties who are to send and receive those messages are not persons who have nothing whatever to do with commerce?—Certainly not; they are the whole community that I expect to get the increase from.

3217. Do not you expect to get your large increase from the extension of your lines into remote districts of the country?—I expect to get a large increase from such extensions; I also expect to get a large increase from large commercial towns.

3218. Your large commercial towns are now 60 per cent. of the present receipts; the figure is nearer 60 per cent. than 55, is it not?—Fifty-five per cent. of the present messages are at the 1 *s.* rate.

3219. And those are in the large towns?—Yes.

3220. Of them, one half is London?—Yes, very likely, that is taking in a variety of matters besides those, that is, taking into account continental messages.

3221. Does your 4,000,000 include continental messages?—No, but the 75 per cent. of revenue does.

3222. Assume that it does?—That is not a fair comparison against my number of messages; that is one of the objections as regards the statements in that little book that we never got face to face.

3223. Those who live in glass houses should not throw stones; let me call your attention to the mode in which this information of yours was obtained; is not that letter of yours to the continental Governments, as leading a letter as could well have been sent by Telegraph Companies to their own officers?—Undoubtedly it was intended to be a leading letter.

3224. Leading them to give an answer in a particular way?—If it were true.

3225. Do you say that the letter that went out from the Electric Telegraph Companies to their secretaries, was asking them to give answers that were not true?—Not at all; I do not say so.

3226. As regards the telegraph which you are going to carry to remote places, is not all the experience of the existing companies against your proposition?—No, I am not inclined to admit that.

3227. Are you prepared to deny it?—Yes.

3228. Do you think you are a better judge of that who have never known anything about telegraphy till now, or the companies who have put forth the statement?—It is from them I get the information.

3229. The information which is in that book?—That was up to a point.

3230. What point?—The point of our coming to terms with them.

3231. Do you say that that book is untrue?—No; I mean to say that that book is true in a certain fashion.

3232. What do you mean by saying it is true up to a certain point; up to what point is the statement true?—Mr. Weaver explained to you why it was true up to a certain point.

3233. I want you to say where it was untrue with reference to what I am examining you about, as to how far any one can expect that the carrying of telegraphs into remote districts can pay the Government?—I have given my reasons for thinking why it would do so.

3234. You heard me ask Mr. Foster whether he was aware that the mileage of the existing telegraphs of France is as much as 68,000?—That is so stated.

3235. And the mileage of wire in this kingdom is 77,000?—Yes; 80,000 I think.

3236. So that France has got telegraphic communication for a population of 37,000,000 for under 1,000,000 *l.*?—Yes.

3237. You propose, for a population of 30,000,000, to expend, to begin with, or what you admit to be, 6,000,000 *l.*?—Yes, but not on that mileage of wire you have mentioned; that is one point to start with.

3238. How many miles of wire would you add to it, to begin with?—That I can hardly answer.

3239. Take any range you like?—I cannot give you the number of the additional miles of wire; we are, no doubt, going to purchase a considerable trade carried on on other miles of wire.

3240. How many additional miles of wire are you going to put up?—I gave an estimate of that the other day.

3241. One

3241. One thousand four hundred?—Yes, in England and Wales.

3242. How many wires would that take?—That would be two wires.

3243. That would give you under 3,000 miles additional wire?—Yes.

3244. Then we have to add that to the 77,000?—That is not all we get for the 6,000,000 *l.*; we get Mr. Reuter's Company; we get the Universal Telegraph Company; we get the South Eastern, the Caledonian, and the North British, and a variety of other things; and not only that, but we get the goodwill. You do not suppose that the French Government would sell the goodwill of their system at the price their system cost them.

3245. What I am asking you is this; if the French Government could put up 66,000 miles of wire for 950,000 *l.*, is not it equally competent to put up in England the same quantity of wire for the same amount?—I should have very little doubt of it.

3246. So that if, instead of your having come for this Bill, a private company had commenced, in your judgment it could have put up the wires for 1,000,000 *l.*?—Very possibly it might, and it would seriously have damaged itself by so doing.

3247. But the physical apparatus necessary for the telegraphs could have been done for 1,000,000 *l.*?—I should not like to commit myself to 1,000,000 *l.*, because the system cost the companies considerably more than that. I told you on Friday that the whole cost to the companies of construction, including the patents and other matters, was over 2,000,000 *l.* I do not know what proportion of that is for wires and posts.

3248. Do you know what the telegraphs have cost in Belgium; do you know that is 80,000 *l.*?—The cost of construction up to the end of 1865 appears to have been 1,670,000 francs.

3249. I see here 83,000 *l.*?—That must refer to a later date.

3250. The present cost of constructing the Belgian lines has been 82,000 *l.*?—Yes.

3251. Do you know what the cost of the construction of the Austrian lines has been?—Unless it is in the paper I have handed in, I do not.

3252. Have you informed yourself with regard to telegraphs in Italy?—I have not.

3253. Nor Germany?—I have given you some information from Prussia, that is nearly all of Germany.

3254. You have informed yourself as to Prussia, Belgium, France, and Switzerland, but not Italy?—No.

3255. Portugal?—No, I know nothing about Portugal.

3256. Do you believe that the whole of the telegraphs which have been constructed on the Continent have cost 4,000,000 *l.*?—I cannot tell you at all.

3257. Have you made yourself acquainted with the rates in America?—I endeavoured to get some information, but I have not been successful.

3258. Your book is silent with regard to the whole system of telegraphs in America?—Yes.

3259. Do you know the rates paid in America?—There are an immense variety of rates in America I am informed.

3260. What is the rate of postage in Switzerland?—It is a varying rate; the average, I think, is 1 *d.*; it is ½*d.* for any distance not exceeding six miles, 1 *d.* up to 30 miles, and 1½ *d.* above.

3261. For everything above 30 miles in Switzerland, you pay 1½ *d.*?—Yes.

3262. The rate at which a telegram is carried, is what?—Fivepence.

3263. So that there the price of a telegram is three times the price of a letter?—Yes.

3264. Whereas in England it is 12 times?—Yes.

3265. Have you a map which shows the names of the places to which you propose to go in remote districts?—No, I have not; but if you take the "British Postal Guide" you have all the money-order offices.

3266. What is about the population in those places where those money-order offices are?—They vary; some as low, perhaps, as 300.

3267. Take the average?—We have one money-order office to every 1,400 houses.

3268. You have one money-order office to every 1,400 houses; that includes houses in large towns?—Yes.

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3269. What is the average in country districts where the money-order offices are?—I cannot give it without inquiry, but we go as low as 300.

3270. You will have many miles to carry posts and wires to get at some of those agricultural villages where you have already money-order offices?—Yes.

3271. Your money orders are managed by the small village postmasters?—Yes.

3272. What do you pay the small village postmasters for the money-order work?—£4. a thousand orders.

3273. One of the means by which, as I understand you, the Post Office will make this pay, is that you would be enabled to induce each postmaster to attend exclusively to your work?—I did not put it so strong as that; I said that the effect would be that we should be able to get a gradually increasing body of postmasters that would attend exclusively to our work.

3274. Take the case of a district with 500 inhabitants?—It would be a great many years before we had work enough for the postmaster there.

3275. How many of those towns will have more than 500 inhabitants?—A large majority.

3276. Up to what?—Out of the 2,000 in England and Wales, 1,500 would have more.

3277. Having regard to that return that was given in the book, how many would you undertake to say will have more than 500 inhabitants?—I cannot undertake to say without inquiry.

3278. Sir *Frederick Heygate*.] Do you at present use the telegraphs for Post Office purposes?—We do.

3279. I suppose from that the acquisition of the telegraphic system would be of great use to the department?—Yes, it would be of use; it would be undoubtedly serviceable to us in our business.

3280. It would increase your efficiency?—Yes.

3281. Would it diminish the cost in any way?—It would certainly diminish the cost by the difference between what we pay now and the shilling rate which we should feel bound to charge for official messages.

3282. You regard the purchase of the electric telegraphs by the Post Office as a material advantage to the working of the Post Office as a national department?—I think it would be serviceable to us and to every other Government department also; the Meteorological Department of the Board of Trade send an enormous number of telegraphic messages, they would derive a benefit from it.

3283. Mr. *Norwood*.] I want some information upon a point not yet touched upon at all that I am aware of; namely, how you propose to work the submarine cables; you are going to take powers to lease those cables, after having bought them, to other bodies?—Yes.

3284. Are they going to work those cables as your agents, or are they going to pay you a fixed sum for the use of them, and receive as profit any surplus?—The whole earnings will be put, as it were, into one box; they will have a fourth of those earnings for the working and the maintenance of the cables; then, as regards all the telegrams with the Continent, we shall have a certain proportion of the receipts from the messages, which are computed to give us rather more than that fourth as our payment for the land lines, and the balance will be divided equally between us.

3285. Those messages would be paid for by stamps, like the inland messages?—As far as we can manage it.

3286. In whose name would this business be carried on; in the name of the Post Office, or of a private company?—It would be carried on in the name of a private company; the submarine work at all the inland stations would be handed in, or delivered from our stations.

3287. The Post Office would not come into immediate contact with the foreign lines?—No.

3288. Have you considered that in a public point of view. I know that many large mercantile firms in the City, who have a large number of foreign telegrams, were in hopes that the reverse would be your course of action?—We have considered that; but there are great difficulties in the way during the time of the present concessions from foreign Governments. The fact is, that the Submarine Company, to which we propose to lease the cables which we require, is a company

pany partly established under the French law and partly established under the English law, and we should have had great difficulty under the terms of the existing concession to buy up the part established under the French law; and, therefore, we propose to leave the cables till the concession falls in.

3289. Are you aware that a very considerable proportion of the telegrams from foreign parts, especially from the Mediterranean, Turkey, Greece, and Southern Russia, come to hand in an unintelligible state?—Yes; I believe that is mainly attributable to the fault of clerks on the other side, over which we could not exercise any control.

3290. As far as I understand, the mercantile complaint is this: that, for instance, I receive a message from Alexandria or Odessa in a state in which I cannot understand it, I complain at once at the telegraph office in London. They say, "We will inquire into it." After about two months they say, "We are very sorry, but it is quite clear that the mistake occurred somewhere abroad, and we have not the slightest influence with the Foreign Telegraph Company." There was an impression that the Government would throw their status and position into the scale, so as to ensure that the mercantile public should be served satisfactorily?—There is no reason whatever why we should not throw our status and position into the scale, and endeavour to ensure accuracy on the part of Telegraph Companies. We are on very good terms with foreign countries.

3291. You make conventions of various kinds with foreign countries now?—Yes.

3292. Is there anything to prevent your doing the same thing with regard to Telegraph Companies?—Provided that our tenants, the Submarine Company, were in accord with us, there would be no difficulty.

3293. Will you promise me that this shall have your consideration; I may state to you but one reason why the mercantile community are in favour of your scheme is, that they believe that the transit of all foreign messages will be greatly improved in every possible way by the Post Office having command of the matter?—I think that I can undertake to say that the matter shall have consideration; I think that I can say for the Postmaster General, that if this Bill should become law, he will have to send to some one abroad to make inquiries with respect to the telegraphs, and I have no doubt that he will do all that he possibly can to impress upon Foreign Telegraph Companies the necessity of greater accuracy and care.

3294. Did you receive a letter from the Newcastle Chamber of Commerce suggesting the propriety of allowing five additional words to your number to be sent for an additional 2 *d.*?—Yes; under the charges specified in the Bill we shall have the power to do that if it were desirable at any time; I am inclined to think that the jump of 6 *d.* for 10 words is too much; that matter will have consideration; there would be power to make the alteration under the Bill.

3295. Mr. *Goschen.*] Have you reason to believe that certain inaccuracies, of which the public complains, in the transmission of messages by Telegraph Companies, are due to economy in the salaries of the clerks?—Really I have not considered that question at all; I never imputed blame at all to the officers of the Telegraph Companies.

3296. Have you considered the question of the emoluments paid by the companies to their clerks?—To some extent.

3297. What was your general feeling with regard to the salaries, as compared with what you would have to pay?—I think in some grades our pay is better; in other grades it is lower than theirs.

3298. In the higher grades, is your pay lower?—In the higher grades our pay is lower; it is the case in all Government departments; in the lower grades their pay is somewhat higher.

3299. Do you think that it is necessary, in order to insure the accuracy in telegraphic communication which the public requires, to increase the salaries?—No, I do not, because I do not believe that inaccuracy exists to any great extent on this side of the Channel; I believe that telegrams, as a rule, are accurately transmitted in this country.

3300. Have you not thought that one of the reasons that might be advanced for transferring the system to the Government is the inaccuracy in the transmission of the messages at present?—No, I always specially excluded that from my consideration of the scheme.

3301. You wish telegraphy to be cheaper and more widely extended and more expeditious,

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expeditious, as the Preamble says, but you do not think that messages will be more accurately transmitted?—I have no reason to suppose that people will do their work better under us than they have done it under the existing companies.

3302. You do not think there is any fear of the cost being increased by the salaries being much increased under the management of the Post Office?—No

3303. With regard to the supply of news to public rooms and so on, have you considered that question?—As we shall no longer collect news, it must rest with those who collect it to supply it; we are willing to carry it on the same terms as for the newspapers.

3304. You would make a contract with the public news-rooms?—The newspaper agents would supply the news to the news-rooms.

3305. *Chairman.*] If the news rooms choose to employ the intelligence agency they would transmit their messages?—Yes.

3306. Mr. *Goschen.*] Would you make a contract with them to transmit their news at less than the public rate?—Yes, if they collected it for themselves; but my impression is they will not care to collect it for themselves, they will go to the news agency and get it from them.

3307. Have you had a correspondence with the newspapers upon the subject?—Yes.

3308. The newspapers are against public news-rooms being supplied?—No, they are prepared to supply it to the news-rooms themselves.

3309. What would they think of news-rooms all over the kingdom combining, and having the news supplied to them through some central quarter in London?—I do not suppose that they would very much like it, and therefore I think they would offer the news-rooms the best terms they could, in order to induce them to take their collection of news.

3310. Have you had your attention called to this letter from the newspapers: "Allow me to inquire whether it is your intention to continue the very objectionable system of competing with newspapers, by supplying public rooms with the information collected for the use of the press. The directors of the Electric Telegraph Company acknowledge that it was a mistake to have attempted it. This competition, objectionable in a private company, would be obnoxious by a public department. The press naturally expects that it shall not, in supplying news, be exposed to competition with a great department supported by the State." I suppose that simply applies to your not supplying information, but would not apply to your making contracts for the transmission of news at a reduced rate?—I should say not. It was a difficulty which I proposed to get out of by ceasing to collect news.

3311. Mr. *Leeman.*] Do you propose, in addition to the 1,400 miles of new line, in cases where a telegraph is now worked to a railway station to take it into a town?—Yes.

3312. There are many towns, are there not, where a line of railway runs now at a distance, say, of a couple of miles?—The extensions that would be required in such cases are in that 1,400 miles.

3313. Do you know Thirsk?—No.

3314. You will have a great many towns at a distance from a railway station?—Yes, we propose to go into a town to the Post Office; it is possible in some of those cases that the Post Office may be close to the railway station.

3315. In such cases you would not extend your wires?—We should go to the Post Office, and if the Post Office was near the railway station, it is a centre of population.

3316. You have plenty of places a mile and a half from a railway station, where at present the Telegraph Companies work the telegraph through the railway clerks?—Yes.

3317. In all these cases you will go into the town?—Yes.

3318. And to that extent you will have an additional cost?—Yes.

3319. And in every one of those cases that you take these 1,400 miles to, you will have a postmaster?—Yes.

3320. What is the number of persons in the employ of the Post Office at this minute?—About 27,000 of all grades.

3321. How many do you propose to add by this?—The greater part of the staff of the Telegraph Companies; I cannot tell you the number.

3322. The Post Office Department of the day, will have agents in every village,

village, with a population of 500?—We have agents in places where there are less than 500 people.

3323. Your staff of 27,000 will be increased?—Yes.

3324. To what extent?—By very nearly the staff of the Telegraph Companies.

3325. In those little villages you will have agents?—Yes.

3326. Is not it the fact that in every one of those villages the postmasters are now asking Parliament to determine that they shall come on the register of voters?—That is so.

3327. The Government will have an agent in every village?—Yes.

3328. At present the appointments to those places are virtually in the secretary to the Treasury?—Yes.

3329. That is the Government in power?—Yes.

3330. Colonel *Fane.*] What rate do you propose to charge for ciphers?—I have not sufficiently considered that point, but I think it will be better to ascertain the average number of letters in 20 words, and to charge for ciphers according to that rate.

3331. *Chairman.*] The usual allowance is five letters to a word, is it not?—I think so; in a little time we should hit the exact average.

3332. Mr. *Norwood.*] The present Telegraph Companies charge each cipher as a word, do they not?—I do not know.

3333. If they do, your rate would be a great boon to the public?—No doubt.

3334. *Chairman.*] As to the 45,000 *l.* for continental messages, how do you arrive at that?—The gross earnings of all the continental cables are taken at 160,000 *l.*; one fourth of that, or 40,000 *l.*, is to be assigned to the Submarine Company for the working and maintenance of all the submarine cables. That will leave a balance of 120,000 *l.* We are to receive out of the produce of the messages one-fifth of every London message and two-fifths of every country message. The result of that would be, that we should get 43,500 *l.* out of the 120,000 *l.*; that would leave 76,500 *l.*, half of which would come to us, and half would go to the Submarine Company. We shall then have from our fifths 43,500 *l.*, and from our half of the balance 38,750 *l.*, making 82,250 *l.*, and out of that we shall have to hand over to Mr. Reuter, 33,000 *l.*, or some equivalent to the purchase of that, which would leave us 49,250 *l.*, which I have put at 45,000 *l.*

3335. Mr. *Goschen.*] The aggregate cost of working, you put down at 40,000 *l.*?—£. 40,000 as the cost of working and maintaining.

3336. That is only 25 per cent. of the total receipts?—Yes.

3337. Whereas the average cost, we were told last Friday, is about 58 per cent. of the receipts?—58 to 66 per cent. I think they are charging us extremely moderately in asking us 25 per cent.; but that is only the share of sending the messages through the cables and maintaining the cables. The 43,500 *l.*, which is the produce of our fifths, represents the cost of working the land concerns; so you must take the two costs together, making nearly 84,000 *l.*; that would be over 50 per cent.

3338. To put the figures in a different way, the aggregate cost of working is 84,000 *l.*?—Yes.

3339. Leaving the 76,000 *l.* as the aggregate receipts?—Yes.

3340. And of that 76,000 *l.* you get 45,000 *l.*?—It is 49,000 *l.* really; I call it 45,000 *l.*

3341. And the other 27,000 *l.* goes to Mr. Reuter?—I will not say that the whole of that goes to Mr. Reuter; we believe we shall purchase Mr. Reuter at 20 years' purchase; he is at present guaranteed 33,000 *l.* a year; but if we purchase his company at 20 years' purchase, we shall not be paying 33,000 *l.* every year, but only paying the interest upon the purchase money.

3342. Mr. Reuter has a contract for 20 years, has he not?—No, he has a contract for 10 years and a concession for 30 years.

3343 Your heads of agreement with Mr. Reuter now are for 20 years' purchase, are they not?—Twenty years' purchase minus what the arbitrator will deduct for the greater risk in the case of submarine cables.

[The Witness withdrew.

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The Committee-room was cleared.

After some time the Counsel and parties were called in, and informed that the Committee had amended the Preamble, by striking out the second paragraph beginning at "whereas the power" and ending with "district or place," and that they had declared the Preamble, as amended, proved.

Clause 1 was read, and agreed to.

Clause 2 was read, and agreed to.

Clause 3 was read, and agreed to.

Mr. *Rodwell* stated that the Promoters had prepared a clause with regard to secrecy, which he was prepared to hand in.

The *Chairman* stated that certain matters had been referred to the Committee specially, upon which he proposed to take the opinion of the Committee, and after the Committee had come to resolutions upon those points, the Committee would proceed with the clauses.

[Adjourned to To-morrow, at Twelve o'clock.

Wednesday, 15*th July* 1868.

MEMBERS PRESENT:

The Chancellor of the Exchequer.	Mr. Norwood.
Mr. Goschen.	Mr. Potter.
Mr. Graham.	Mr. Charles Turner.
Mr. Leeman.	

THE CHANCELLOR OF THE EXCHEQUER IN THE CHAIR.

ON the Electric Telegraph Companies' Clauses.

Frank Ives Scudamore, Esq., called in; and further Examined.

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3344. Mr. *Goschen.*] HAS the precedent of the Act for the purchase of railways in 1844 guided the Promoters of the Bill in the terms they have offered? —When first we met the Telegraph Companies upon the subject, which was, I think, some three months back, I am not quite certain, the terms they asked were 25 years' purchase of their prospective profits, and they supported their application by reference to the Railway Purchase Act. But the Railway Purchase Act did not contemplate 25 years' purchase of prospective profits.

3345. Nor did it contemplate 25 years' purchase of the last year's profits?—It contemplated, when the dividend of the company reached 10 per cent., giving 25 years' purchase of the average profits of the last three years; but when the dividend of the company was not 10 per cent. it was to be competent to that company to go to arbitration for an increase upon the 25 years' purchase of the profits for the last three years.

3346. Then the maximum allowed under the Railway Purchase Act was 25 years' purchase of a 10 per cent. dividend?—No, there was no limitation; it was merely that when a company paid 10 per cent. or more it was to be absolutely 25 years' purchase of the profits of the average last three years, but there was no limitation as to 10 per cent.

3347. If it were not 10 per cent. it was to be referred to arbitration?—If it were not 10 per cent. it was to be 25 years' purchase of the average profit of the last three years, plus whatever the arbitrator would give.

3348. *Chairman.*] As to the Railway Purchase Act, the Railway Purchase Act only referred to railways to be made subsequent to the passing of the Act? —Yes.

3349. So that those companies which had constructed railways previously to the passing of that Act, were not bound to come under its terms as regards sale? —No.

3350. Does not that make an important difference in the consideration?—I should imagine a very important difference.

3351. Mr. *Goschen.*] Does it make an important difference in the mode of purchase which Parliament thinks is the fair one?—I think it makes a difference in this way, that the Post Office Parliament would not say, with regard to an existing interest, that it had a right absolutely to compel them to sell at 25 years' purchase.

3352. You have stated what the companies asked you before you agreed to those terms; will you state the various offers you made to the companies?—On the 5th of June we made this proposal to the Telegraph Companies: "1. The basis of purchase to be the highest price realised on the Stock Exchange up to

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the 25th May. 2. The amendments proposed by Mr. Greaves to be conceded, if approved by Parliament." The effect of that would have been, as we understood, to give the companies any advantage which a compulsory sale is usually supposed to give to unwilling vendors. " 3. The principle of compensation to officers not provided for by the Post Office, to be admitted in the case of officers engaged at yearly salaries, and having served for not less than five years. 4. If terms not agreed on, refer to arbitrators, one to be nominated by each party, and are therefore to be chosen from a list." I have said that the first clause of that was "the basis of purchase to be the highest price realised on the Stock Exchange up to the 25th May;" what was intended by " basis," was the starting point or minimum price. The effect would have been, that we should have given as the minimum price the highest they then could have got from the public, and whatever the arbitrator would have added for compulsory sale or prospective profits.

3353. That is given up now?—They refused that.

3354. What were the highest points that had been reached by the shares up to that date?—I believe the Electric Telegraph Companies' shares had reached 172 *l.* 10 *s.*

3355. And the others?—The Magnetic Telegraph, I think, had been sold at 131 *l.*

3356. The third?—I can hardly tell you what they had been sold at, they have two or three kinds of shares, preferential and ordinary, I am not quite certain.

3357. Are you sure about your date, that those prices were reached before May?—So I have been informed, I have no actual knowledge upon the subject myself, I was told that the highest price realised for electric telegraph shares had been 172 *l.* 10 *s.*; in fact a shareholder wrote to me telling me that he had sold his at 172 *l.* 10 *s.*

3358. I see in the official list on the 23rd of June, that they were only about 166 *l.*?—Yes, they were lower at that time than they had been prior to the 5th of June.

3359. Are you aware what the price was in January?—I have it in the previous November.

3360. Will you state what it was in November?—On the 1st of November electric telegraph shares ranged from 143 *l.* to 148 *l.*

3361. The British and Irish Magnetic?—£. 97 to 102 *l.*

3362. Would you object to say what you think would have been the maximum which an arbitrator would have allowed for compulsory sale?—I think he would have allowed 10 per cent., I think that is the minimum he would have allowed.

3363. Possibly he might have gone as high as 15 per cent. for compulsory sale?—Possibly.

3364. That would have appeared high to you?—I think that would have been high.

3365. The analogy would be the sale of land and other things of a like nature, where you are obliged to sell, you always get somewhat more than the value of the thing itself. You say compulsory sale, is this a compulsory sale on the part of the Telegraph Companies?—Practically it is.

3366. Do you mean this, that the Telegraph Companies have the same right, so to speak in a monopoly (and to say that the Government shall not compete with them), as a man has property which he has acquired and bought?—I will not say they have no right to expect that the Government shall not compete with them, but they have a fair right to say if the Government by competing threatens to destroy their trade, it is actually compelling them to sell it.

3367. Have they not undertaken their business subject to the various risks of competition?—They did not undertake their business subject to the risk of Government competition.

3368. They could never be certain that Government would not enter into competition with them?—At the time they entered upon their business, they must have felt it highly improbable that the Government would enter into the business.

3369. It is a moral claim against the Government not to compete with them?—It is a moral claim of a very strong character, indeed.

3370. Not a legal claim:—I presume they have an equitable demand on the Government.

3371. By "equitable" you do not mean a legal demand; they would have no *locus standi* in a court if the Government were to begin to work telegraphs to-morrow?—No, I presume not.

3372. Therefore the Government is in this position, it says, I am going to compete with you; you did not expect me to compete with you, and therefore, so as not to discourage private enterprise on similar occasions, I will pay you the full value of your property, and a bonus into the bargain, that is about the position?—Yes.

3373. Do you think it is necessary that that bonus should be so large that the companies absolutely and unanimously agree to it, would you call it confiscation if you offered less terms than the companies would unanimously agree to accept?—I do not think that it would be right to force the companies to sell at terms that they had not agreed should go to arbitration.

3374. Then you hold this, that if there is any trade or enterprise being conducted in the country which it is necessary for Government purposes that the Government should undertake itself, it is barred from doing so, unless the parties engaged in that enterprise consent?—I certainly think that the Government is bound in equity to satisfy the claims of those who have put their capital into an undertaking, in the expectation of carrying it on, and have obtained a large revenue from it.

3375. I put an extreme case: supposing the Telegraph Companies had held out for 25 years' purchase, would the Government practically have had to choose between abandoning the Bill and granting the terms?—No, I do not think that the Government would have had to choose between abandoning the Bill and granting the terms; the Government might have gone on with a Bill, providing that the whole terms should be settled by arbitration.

3376. That would not have been unjust to the companies to compel them, to use your term, to sell by arbitration?—No, I do not think it would, because I am convinced that the arbitrator would have given them a fair value for their property; yet I am by no means convinced that we should get the property on better terms than now.

3377. You think that the Government are not entitled to offer terms even extravagantly high, as regards the market value of the property, and to say, "I will proceed and compete with you if you do not accept those terms," but that the Government is entitled to say, "What the arbitrator awards you shall be compelled to accept, whether it suits you or not"?—Yes; I think such a power must rest in Parliament.

3378. You hold that the State has the right to undertake this telegraph business, provided it indemnifies the parties fairly?—Yes, undoubtedly, if it indemnifies them; and I assume that the result of the arbitration would be fair, the mode of arbitration being defined.

3379. Do you think that the companies would have agreed to arbitration?—I do not think they would.

3380. Do not you think that they would have opposed arbitration tooth and nail?—I think they would.

3381. You say if you had only offered them 20 years' purchase, they having stuck out for 25 years' purchase, it would not have been fair to force them to take 25 years' purchase?—I should not have proposed to force them to take 25 years' purchase, because I have always contended that they ought not to have it.

3382. Suppose that you were only prepared to offer 20 years' purchase, and they held out for 25 years' purchase, you say it would not have been fair to have put 20 years into the Bill?—No, I do not think I said that it would not have been fair to put 20 years into the Bill. I think it would have been quite fair to put terms into the Bill, provided some range were left to the arbitrator.

3383. Do you think that absolute consent on the part of the companies to the agreement was necessary before you could proceed with the Bill?—In this particular Session it was undoubtedly necessary.

3384. Then, in fact, the situation was this, if you could not come to terms there was not sufficient time to pass the Bill?—Undoubtedly.

3385. Therefore it was necessary to get rid of the opposition of the Telegraph Companies by agreeing upon terms, so that they would withdraw their opposition?—Yes, bearing in mind that the object of carrying the Bill this Session was to prevent our having to pay more next Session, or more the Session after.

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3386. That would have depended entirely upon the view you took of the purchase; if you thought that 20 years' purchase was fair at one time, it would have been fair another six months hence?—Undoubtedly; but the revenue would be greater next year and there would be more to buy; and therefore on the same terms we must pay more money.

3387. If the pressure of time induced you to give higher terms than you otherwise would have given, very possibly the excess in those terms would be greater than the excess arising from the increase of revenue in the course of six months?—No, I think not, and I certainly must not be supposed to have said that we offered higher terms than we otherwise would have offered; I did not intend to say that.

3388. You say that time made it necessary for you to come to an agreement with the Telegraph Companies?—I say that it was a great object to carry the Bill this Session, because the longer the purchase of the property is delayed the more it will cost us. I say also that I would rather that the whole terms had gone to arbitration than have offered the 20 years' purchase, because that would have thrown the responsibility on the arbitrator and taken it off my shoulders; but having been put into this difficulty, either to abandon the Bill this Session or to offer some terms, I thought it desirable to offer those terms which I believe are fair to the Government as well as to the companies.

3389. Am I to understand that you believe that if those terms are altered, the companies now would oppose the Bill with effect, and prevent it passing into law?—I do not know what view they would take of the matter. I think if the terms were altered they would hold that they were not bound to the agreements.

3390. Are they bound to the agreement now?—Yes.

3391. Have they not got it within their power to reject the agreements if they do not like them; have you not given them an option?—Undoubtedly the shareholders have the right to refuse to ratify them.

3392. So that you stand in this position, that the Government is bound, subject to the money Bill, but the companies, if they find that it does not suit them, are free, because the shareholders have not ratified the decision?—I am not aware that they have.

3393. Mr. *Norwood.*] Is it the fact or not that the directors of those companies are not in a position to sell without the consent of those shareholders?—That is the fact.

3394. You have not given them the loophole?—No, it is the law that gives them the loophole.

3395. Mr. *Goschen.*] The position is such that they have the option?—They have the option, which we could not take away from them.

3396. You might have reserved that both parties should be open to withdraw from the agreements, that the Government should withdraw from its side also till the time when they had been ratified by the shareholders?—I did not think it necessary to do that, feeling it certain that the shareholders would ratify what the directors had done.

3397. In consideration of the very favourable terms which they had obtained?—Of the fair terms which they had obtained.

3398. Is it the fact that these companies are exposed to competition from other companies?—Practically, I think, they are not exposed to any competition.

3399. Will you explain that?—They have, in the first place, a harmonious working agreement amongst themselves; they are agreed as to the rates they shall charge to the public; they have got the command of all the roads of the country, and there is hardly any possibility of capital being put into any undertaking to compete with them.

3400. What do you mean by the "command of the roads?"—By their agreements with the Railway Companies and the canals, and also by the lines they have got upon the public roads of the country, they have the command of the kingdom.

3401. As regards the railways, what is the longest time that they have got for working agreements with the railways?—Some of their agreements are in perpetuity, and some of them are for three years only.

3402. When they are three years, is it not plain that at the end of the three years another company might offer more advantageous terms to the railways, and make an agreement with them?—I do not think it would be in the power of any new

new Company to offer more advantageous terms to the Railway Companies than the existing companies with the trade in their possession can offer.

3403. *Chairman.*] Will you give the Committee some particulars about the terms of the agreements with the Railway Companies?—I have taken out the mileage of each railway affected by an agreement with a Telegraph Company, and the years over which each agreement has to run, and I find that the agreements which are to end in three years only affect 23 miles; the agreements which are to end in four years affect 38 miles only; the agreements which are to end in five years affect 1,219 miles; so that in the case of 1,280 miles of railway the agreements run for periods of from three to five years; 343 miles are affected by an agreement which is to end in six years; 177 miles by an agreement which is to end in seven years; 1,346 miles by an agreement which is to end in seven and a half years; 1,114 miles by agreements to end in eight years; 147 miles by agreements to end in nine years; and 919 miles by agreements to end in 10 years; so that 4,046 miles are affected by agreements which have from five to ten years to run; 1,624 miles are affected by agreements to terminate in 11 years; 503 miles are affected by agreements which are to terminate in 12 years; 206 miles are affected by agreements which are to terminate in 13 years; 116 miles are affected by agreements which are to terminate in 14 years; 11 miles are affected by agreements which are to terminate in 15 years; 27 miles are affected by agreements which are to terminate in 16 years; 72 miles are affected by agreements which are to terminate in 17 years; 23 miles are affected by agreements which are to terminate in 18 years; 419 miles are affected by agreements which are to terminate in 19 years; and 210 miles are affected by agreements which are to terminate in 20 years; so that 3,211 miles are affected by agreements ranging from 10 to 20 years. 192 miles are affected by agreements which are to terminate in 21 years; 78 miles are affected by agreements which are to terminate in 22 years; 8½ miles are affected by agreements which are to terminate in 24 years; 62 miles are affected by agreements which are to terminate in 25 years; 44 miles are affected by agreements which are to terminate in 31 years; 246 miles are affected by agreements which are to terminate in 36 years; 5 miles are affected by agreements which are to terminate in 43 years; 150 miles are affected by agreements which are to terminate in 47 years; 3,218 miles are affected by agreements which are to terminate in 50 years; and 929 miles are affected by agreements which are to terminate in 99 years and in perpetuity; so that there are 4,927 miles the agreements with respect to which range from 20 years upwards to perpetuity.

3404. What is the total mileage?—13,464 miles; the average terms of agreement is 23 and two-thirds years.

3405. So that with reference to the question put to Mr. Foster by the Honourable Member for York whether it was an improvident bargain to give 20 years' purchase for a 10 years' leasehold, that is not a length of term applying to the Railway Companies generally?—No, only to a small extent.

3406. Mr. *Goschen.*] Does it apply to a large amount of mileage?—Five thousand miles are affected by agreements running from three to ten years.

3407. *Chairman.*] The companies who make the agreements for those periods longer than 10 years are the same companies in many cases who make the agreements for shorter terms; would it have been possible for a competing company to have come in and made an agreement for one of those shorter terms with a Railway Company, without also making an agreement with one of the other Railway Companies for a longer term?—No.

3408. So that the fact is, that the Telegraph Companies, having an agreement for long terms with some of the lines, practically prevents competition by those who would come in after the expiration of the short terms?—Yes.

3409. Mr. *Goschen.*] You mean to say that they are ruled by the longest term?—There is no doubt that on certain portions of the road competition is possible, but as it would be useless to a Telegraph Company to compete on a small portion of the road only, competition practically is very unlikely to occur.

3410. From London to Liverpool part might be free, for instance, while the other was not free?—Yes.

3411. If the present companies, by having a monopoly, had run up their dividend to a certain point, a company might be formed between London and Liverpool which might make arrangements with the Railway Company?—I do not

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not think that there would be the slightest chance of any company being formed which could offer better terms to the Railway Companies than the existing companies give them, and still keep their trade.

3412. If an existing company showed a large surplus it would leave a margin for competition?—The trade is growing at such a rate that whenever any of those agreements fell in, the Telegraph Companies could have offered better terms if it were necessary for them to do so, and that is what they have been doing; no doubt in the last six or seven years they have been giving better terms to the Railway Companies, and they have even in spite of that made a gradually increasing revenue; I believe that the agreement between the Electric Telegraph Company and the Great Western Company, which has 50 years to run, gave the Great Western much more favourable terms than they previously had.

3413. You rest the certainty of the monopoly remaining with the Telegraph Companies upon two points: upon the harmonious action of the companies together, and upon the command of the roads?—Yes.

3414. In the command of the roads, they lose 5,000 miles in 10 years?—In the command of the roads they may have to pay something better for 5,000 miles in 10 years; that is the strongest way in which it can be put.

3415. There is the possibility that other companies may get that command of the roads if they will offer the companies more than the existing Telegraph Companies?—Practically I think that is impossible.

3416. Though you yourself look forward to an immense expansion of trade, you think it is not within the range of reasonable probability that they can be interfered with?—I do not think it at all possible that they can be so far interfered with as materially to damage their property.

3417. In the case of any enterprise producing good dividends, and where there is no legal monopoly existing, is it not certain that they will encounter competition. In the case of railways, which are more difficult to compete with than telegraphs, if there is a great deal of traffic on a railway you will have another railway made, will you not?—I do not think that there is any great likelihood of the formation of many more railways to compete with the existing ones.

3418. That is because you do not think that the dividends are high enough?—If the dividends were much higher, I question whether there would be much competition.

3419. Have you not seen sufficient competition, when there has been a large traffic on a railway?—There has undoubtedly been competition in some cases.

3420. I take it from you that the Promoters of the Bill have offered these terms, because in their judgment the four Telegraph Companies are able in perpetuity to monopolise the telegraph business of the United Kingdom?—No, not in perpetuity.

3421. For 20 years to come?—Certainly.

3422. *Chairman.*] When a notice has been given to purchase any undertaking, is not it the fact that the value of the property almost always rises in the market?—Yes.

3423. The longer the delay that takes place in the purchase, after notice is given, the higher the price which is eventually paid?—Yes.

3424. Is not that the result of all experience in taking land for public purposes?—I believe it is.

3425. With regard to the terms which were eventually offered to the Telegraph Companies, was not it considered that the arbitrator would take as his starting point the price which the shares had actually fetched in the market?—Yes.

3426. And that he would make an addition to that?—Yes.

3427. In the case of the Electric Telegraph Company the price in the market represented 17½ years' purchase?—Seventeen and a quarter years' purchase of their dividend.

3428. And then there was an addition made to bring it up to 20 years, as representing that which an arbitrator would add for compulsory sale and prospective profits?—Yes.

3429. Mr. *Goschen.*] The 172 *l.* 10 *s.* represented the expectations of the company to be purchased, which expectations had risen considerably?—I do not think it

it can be said to have represented the full expectation; whoever bought at 172 *l.* 10 *s.* expected to get something more.

3430. Mr. *Goschen.*] The 172 *l.* did not simply represent 17 years' purchase of the dividend, but represented 17 years' purchase of the dividend, plus a certain rise which had taken place in virtue of the negociations that were going on.

3431. *Chairman.*] Was not it considered that no arbitrator would give less than what the shares sold at in the market from whatever cause?—Yes.

3432. Was it considered that the arbitrator would add something for sale in the nature of compulsory sale?—Yes.

3433. Mr. *Norwood.*] Is the real value of a public undertaking fairly represented by the price of the day in the share market?—No.

3434. Is not it the fact that speculation being active or the contrary in the money market has a great deal to do with the value of securities?—Yes.

3435. Is the present a period of inflation upon the stock exchange?—Decidedly not.

3436. Have you any knowledge of the present value of money in the open market?—I cannot answer that question; I know that it is very low.

3437. Does that show you, as a man of business, that speculation is rife, that trade is active, and that people are in high spirits and are inclined to make investments?—Certainly not.

3438. Is not it possible that a company's shares may be worth 100 *l.* where the public are not aware of its real position?—Yes.

3439. And therefore the market value of a public undertaking at any day is not necessarily the *bonâ fide* value?—Not necessarily.

3440. You say that there are two ways by which private interests might equitably be purchased for public purposes; one is by private agreement between both parties, and the other is by the system of arbitration?—Yes.

3441. Parliament has for many years sanctioned for the public good the purchase of private rights, and the value of those private rights must be ascertained by arbitration?—Yes.

3442. That was the way in which you proposed to deal with private rights in your Bill, in the first instance?—Yes.

3443. Then you found it necessary, for certain reasons, to make arrangements which you could do; you have made those arrangements, and you believe that you have made those arrangements in the interests of the public?—We do; and we have endeavoured to leave as much to arbitration as we could.

3444. Mr. *Goschen.*] What were the "certain reasons?—I gave the only reason; I stated that I thought it very desirable indeed that the Bill should be carried this year, with a view to saving greater expenditure.

3445. Mr. *Norwood.*] The Telegraph Companies are carrying on their telegraphs under the sanction of Parliament?—Yes.

3446. That sanction of Parliament was given on the ground of public benefit? Undoubtedly so; so all their Acts express.

3447. You repeat your statement, that after a very careful analysation of the figures, instead of the interests in the telegraphs vesting in the Railway Companies in 10 years, the average is 23½ years?—That is the average of the whole mileage.

3448. The agreements with the Railway Companies vary; in some instances the plant becomes the property of the Railway Company, and in other instances the plant remains the property of the Telegraph Companies; and they would have to remove it off the Railway Companies' property, should the Railway Companies decline to permit them for a further term to use their posts?—In every instance that I know of, with the exception, perhaps, of some few miles, the property of the Telegraph Company remains their property, and all that is incumbent upon them is to carry it away.

3449. That is the case in the great majority of instances?—Yes; I do not think that there is any remarkable case in which the wires and posts exclusively used for public telegraph business become the property of the Railway Company at the end of the term.

3450. Is not it as much the interest of the Railway Companies to retain the telegraph wires as it is for the owners of the telegraph wires to retain their position upon the posts?—Yes.

3451. It is a mutual advantage?—Yes.

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3452. And it would be a great disadvantage to the railways if the telegraphs were removed?—Yes, they would lose in the maintenance of their own lines.

3453. Is not it really the case that though the shareholders in the companies whose property you seek to purchase must be consulted before the sale is a final one, Parliament has also a veto which cannot be disputed with reference to a Money Bill next year?—Undoubtedly.

3454. Mr. *Goschen.*] You think that there can be no charge of bad faith made, if Parliament does not vote the Money Bill next year?—No, I think not.

3455. Mr. *Norwood.*] There might be certain contingencies arise which might make it undesirable, in the opinion of Parliament, for the Government to disburse so much money?—Yes.

3456. The sum total might be so large that the new House of Commons might say, "We will not go to this expense"?—Yes.

3457. So that the power of withdrawing from the arrangement is not all on one side?—No.

3458. Mr. *Goschen.*] Are you sure that the companies understand it in that way?—My impression is, that the companies all understand that the agreements are made subject to the approval of Parliament; what I think they said yesterday was, they quite acknowledged the power of Parliament to cancel the whole agreement, but not to substitute for it another agreement.

3459. If it should be considered that it was not desirable to spend 6,000,000 *l.* upon it next year, no charge would be brought against the Government for having kept them in suspense?—I do not understand that they would hold that there had been any breach of faith, if Parliament decided to sweep away all the agreements.

3460. Mr. *Turner.*] I suppose the companies in making those agreements rely upon the assistance of Government in promoting that Money Bill in the next Session?—Yes.

3461. Therefore, there would be no breach of faith on the part of Parliament, but there would be a breach of faith if the Government were not to use their endeavours to carry the Bill?—I think so.

3462. Mr. *Norwood.*] It is impossible for Parliament, then, to bind their successors?—Unquestionably.

3463. Morally there is a claim on the part of the Government of the day to carry out this arrangement; but still, circumstances might arise that might prevent Parliament doing it?—Yes.

3464. Therefore, the bargain with regard to the vetoing of the agreement is not only on one side?—I think we have the advantage of the companies.

3465. *Chairman.*] The Right Honourable Member for the City put a question as to whether the companies might not anticipate a possible competition from the Government without purchasing up their lines; would not it be necessary for the Government to come to Parliament for an Act to enable them to carry on telegraphic operations?—Undoubtedly.

3466. Would there be any possibility of the Government getting such a Bill passed in the face of the opposition of the Telegraph and Railway Companies?—I should not like to be the Minister to propose anything of that sort in Parliament.

3467. Mr. *Norwood.*] You have been asked whether or not a new undertaking might not be able to give more for the privilege of using the Railway Companies' posts than an existing Telegraph Company whose term was expiring. The Electric Telegraph Company, according to its accounts, divides 10 per cent.?—Yes.

3468. And they put by a certain surplus?—Yes.

3469. Armed with that surplus, and doing a large and increasing business, would it not be a richer company than a company starting *de novo*?—It could always outbid any new company.

3470. It would be in a better position than a new company?—Yes.

3471. Looking at the fact that it is a flourishing company, dividing a good dividend, possessed of a surplus, and having the trade?—Yes.

3472. Mr. *Potter.*] If the shareholders refused the present terms accepted by the directors, would you think the Post Office would be justified in making their own lines?—I think we should certainly have gained an additional argument in favour of our doing so.

3473. You would not consider that it was an unfair competition after that?—Certainly not so unfair as before.

3474. It is a risk the shareholders run in case they refuse to ratify the agreements?—Yes.

3475. Mr. *Norwood.*] You would fall back on arbitration under your Bill?—Yes.

3476. If this Committee were to say, "We do not approve of those agreements; we think they are improvident agreements," the matter would then fall upon arbitration?—Supposing the Bill were carried.

3477. Mr. *Goschen.*] Were there any other offers made by you before the one of which you have spoken?—No, we made no other offer; we refused to give the terms they asked.

3478. You have made three offers altogether; first, simple arbitration; that was the original proposal?—We put that into the Bill, if you call that an offer.

3479. That was your first proposal; the second was to buy at the full price of the shares with what the arbitrator would give for compulsory sale; and the third is the proposal embodied in the Bill?—Yes.

3480. Mr. *Turner.*] You have been asked by the Honourable Member for the City of London, whether in the case of competition by the Government, the existing companies would have any legal claim for compensation from the Government, I think you said you thought they would not?—I think they would have no legal claim.

3481. Do not you think that they would have a strong claim upon Parliament for protection against such competition?—Certainly, the very fact of their having no legal claim strengthens their equitable claim.

3482. Would not that be a claim which in all probability Parliament would acknowledge?—Yes.

3483. Therefore it would be necessary before the Government would have any chance of getting a Bill passed for that purpose, to make such provision to satisfy the claims of those companies as Parliament should deem equitable?—Yes, I do not think any Act could be passed except upon the condition that they should be compensated.

3484. Would not Parliament view a competition by Government in a very different light from competition by any private company?—It seems to me so.

3485. Do not you think that it would be alleged that no company established under Act of Parliament to conduct an enterprise of this kind, could fairly expect that the Government would bring the public money and the public influence into competition with them after their trade was established?—Yes.

3486. That trade in the beginning being of a doubtful character?—Yes, having entailed considerable loss upon them in the early stages of their career.

3487. And it is possible that Parliament might not think it sufficient to protect such a company by a reference to arbitration, even?—They might not think so.

3488. Is not it the case frequently where corporations come into contact with existing water companies and other undertakings of that kind, and so bring the money of the town to bear upon them, that Parliament is excessively jealous in allowing such competition without the claim of those companies being recognised?—I believe Parliament uniformly protects private enterprise.

3489. Against the use of public money?—Yes.

3490. They are always more jealous of public money being brought to bear against private enterprise than they are of private money being brought to bear against private enterprise.

3491. Therefore, they would give a greater amount of compensation, if the Government were to interfere, than they would if a private company were to interfere?—Yes.

3492. Mr. *Goschen.*] Have you ever heard of anybody who has denied for a moment that the Telegraph Companies were morally entitled to compensation from Parliament?—No.

3493. Surely the point is this, not that anybody thinks that the Government ought to compete with private companies without indemnity, but whether the fact that they have no legal claim prevents them from making exorbitant and preposterous demands?—No doubt.

3494. *Chairman.*] In the case of the Railway Purchase Act, the Railway

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Companies who were bound to sell were open to competition, were they not?—Certainly.

3495. So that the Government might have purchased the Railway Companies at 25 years' purchase, the Railway Companies being open to the competition of other Railway Companies to be started after the Act was passed?—Yes; when that Act was passed there were comparatively few railways.

3496. Mr. *Turner.*] You do not think that the fact of the companies not having a legal claim ought to diminish the amount which Parliament ought to give them in consideration of their moral claim for protection?—No, I do not.

3497. The question is put to you that they have no legal claim; you do not think that that is a matter which ought to be taken into account with reference to the protection which Parliament ought to give them against a competition wholly unexpected, and which probably would not be considered by Parliament a fair competition?——

3498. Mr. *Goschen.*] You think them entitled to the same compensation, having a practical monopoly, as if they had had a legal monopoly?—I do.

3499. The practical monopoly which they enjoy as the result of circumstances, ought to be compensated for the same as if it were a legal monopoly?—Yes, you must in buying their property look at what they have got, no matter how they have got it.

3500. Mr. *Turner.*] There are only three or four large companies?—Only three large Telegraph Companies.

3501. Have not those companies arrangements amongst themselves for mutual protection?—Yes.

3502. Of course that is brought to bear against a new company proposed to be established?—Yes.

3503. And therefore your opinion upon the difficulty of a new company establishing itself, is based partly upon that arrangement which they have amongst themselves?—Yes.

3504. And which was brought to bear very strongly against a new company which was formed not long ago?—The two larger companies forced the United Kingdom Company to come to a harmonious arrangement with them.

3505. And having so forced them, they would bring the same means of compulsion to bear upon any new company?—They would bring the same kind of means, but in a greater degree, the three are stronger than the two were.

3506. Therefore that, in your opinion, would make it very difficult, if not impossible, for a new company to establish itself in the face of that opposition?—Very difficult, indeed.

3507. Mr. *Goschen.*] In fact, Parliament has committed to them a power which prevents the country, unless the Government steps in, ever having the advantage of cheaper telegraphy?—Ever having the full advantage.

3508. The Telegraph Companies of all the industrial enterprises in the kingdom have got into this advantageous position, that they are perfectly secure against any competition for 10 or 20 years unless bought by the Government; they have therefore established a monopoly, and are now getting monopoly terms?—Yes.

3509. Mr. *Turner.*] It was said that those companies were restricted to a 10 per cent. dividend?—One company is so.

3510. Did not one of the officers connected with that company say that practically they could make any dividend they chose; that they could walk round the Act of Parliament and make any dividend they chose?—I did not understand him to say that.

3511. *Chairman.*] That is a matter that would go before the arbitrator?—No doubt all he said would be part of the subject matter for the arbitrator's consideration.

3512. The whole question of what the companies consider to be profit is one for the arbitrator?—Yes.

3513. Mr. *Graham.*] You have told us that you do not desire a legal monopoly on behalf of the Post Office?—Yes.

3514. You have stated notwithstanding the absence of a legal monopoly, you are quite satisfied that you will have a practical monopoly?—Yes.

3515. The Telegraph Companies in the same way have no legal monopoly?—No,

No, they have no legal monopoly, that is to say, they are exposed to competition if a company can be got up to compete with them.

3516. But nevertheless upon similar grounds to those influencing you in your evidence, when you said that you should have a practical monopoly, you consider that they now do have a practical monopoly?—Yes.

3517. So that whatever practical monopoly you anticipate having, you have no doubt the Telegraph Companies at present possess?—Just so.

3518. Mr. *Leeman.*] I had not the advantage of hearing your evidence upon this statement of the number of years that the agreements have to run on the various lines of railway, but on casting my eye through it, I observe that it is made upon the basis of the miles of line?—Miles of railway.

3519. Not miles of wire?—No.

3520. The value of the reversion to the Railway Companies will consist, will it not, in the extent of the wires they have got, and not in the mere posts?—I do not quite understand your point.

3521. Take the Midland Railway Company, you tell us the Midland has got eight years to run, the Midland may have a dozen wires, may it not?—There may be a dozen wires used, partly for railway purposes, and partly for commercial purposes.

3522. At the end of eight years, whatever the number of wires were, they would fall to them?—I do not understand that the wires will fall to the Midland Company.

3523. Do not you know that they have the reversions in them?—No; what I understand is this, that the wires used for the railway purposes will unquestionably be the property of the Railway Company, in fact, in a great many instances they are practically the property of the Railway Company at this moment, but the wires for commercial purposes can only be removed, and are not the property of the Railway Company.

3524. The right of removal is in the Railway Company?—The right to require removal is no doubt in the Railway Company, but that does not give the railway the possession of the property.

3525. At all events it entitles the Railway Company to denude you of the possession of them?—Of the way-leave.

3526. Therefore the value to the company of that to which it would go to arbitration upon would be influenced largely by the relative number of wires, would it not; take the Midland, whose agreement has eight years to run, the Midland at the end of the eight years has the reversion in a much larger number of wires than many of those small companies, the Port Patrick, for instance. The Port Patrick will have, perhaps, a single line of wire or a double line of wire, whereas the others may have many more?—That is extremely probable.

3527. You have informed yourself of the nature of those agreements, as I understand?—I have done my best to do so, but I have had very little time to read them. I should not like to be examined upon the agreements themselves, I know generally the nature of them.

3528. As to the number of miles of wire, have you not, in order to inform the Committee as to this question of the average, informed yourself of the relative number of miles of wire as well as the relative number of miles of posts?—No, I have not.

3529. To take the London and North Western Railway; the London and North Western Railway has seven and a half years to run. All the large companies, in fact, have the short periods, have they not?—No; the Great Western Railway has 50 years to run, and the South Western Railway 99 years.

3530. The London and North Western Railway has seven and a half years to run and the Great Northern five years to run?—Yes.

3531. And the North Eastern Railway has how many?—The North Eastern Railway has 11 years to run.

3532. The Midland has eight years to run?—Yes.

3533. The Great Eastern?—The Great Eastern has 10 years.

3534. The Midland Railway and Great Western Railway?—Five years.

3535. The Glasgow and South Western Railway?—Five years.

3536. The East Lancashire Railway, which is now Lancashire and Yorkshire?—Six years.

3537. The Great North of Scotland Railway?—Six years.

3538. The Caledonian Railway?—Eleven years.

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3539. Excluding the Great Western Railway Company, have I not given you the mass of the large companies, north of the Thames, as far as Inverness?—You have given me a considerable number of large companies.

3540. Those are companies where the number of wires upon the posts would necessarily be larger than in those smaller ones which you have given us?—Yes, certainly larger than in the case of the Port Patrick and such railways.

3541-2. Have you any idea of the number of miles of wire now existing on the London and North Western Railway, or the Midland Railway, or any of those large railways?—No.

3543. You were asked as to the price of the shares of the Telegraph Company. What was the price of the Electric Telegraph Company's shares last February when that letter was written to the Treasury, which is in your book?—We had a statement worked out, I have not got it here. I can give it you before the notice for the Bill was given, 143 *l.* to 148 *l.*

3544. What was your first offer to the companies?—Our first offer was that the whole should go to arbitration. Our first offer was conveyed in the Bill. We proposed in the Bill that the whole should go to arbitration.

3545. You never made them an offer till the 5th of June?—Not other than the original offer contained in the Bill.

3546. You had made them no offer nor had any negociation with them in February?—No.

3547. Nor when your book was laid upon the table of Parliament?—I do not know about that; I do not know how the dates run; the Bill was ordered to be printed on the 1st of April, and we had then done nothing but proposed in the Bill that the whole question should be settled by arbitration.

3548. At the time when your book was ordered to be laid on the table and distributed for the use of Members, there was nothing on the face of that book which could lead Parliament to suppose that you meant to propose anything beyond your original estimate?—No.

3549. Your estimate of 2,400,000 *l.*?—Yes.

3550. You heard Mr. Foster's evidence as to his having acted on the assumption of 10 years' average in the existing leases?—I am not quite certain that he said that: I did not hear him very distinctly; it is quite probable that he did say that, because we put it to him at 10 years.

3551. Was he right in assuming 10 years?—No.

3552. How came you to put it before him?—Because I had not made out this statement accurately; I had heard it constantly stated that the average was 10 years, and I had only been able to look at a certain number of agreements which mostly appeared to end in 10 years; therefore I took that it was only last night that this statement was prepared.

3553. You had taken the agreements of the large companies to which I have been drawing your attention?—I do not think I had taken all of them; I had the agreements of several companies.

3554. Those were the large ones having those short terms?—I had taken several companies with short terms.

3555. And having taken several companies with short terms, you put it to Mr. Foster that, for the purpose of confirming your estimate, he might take the length of the term at 10 years?—I said I thought the average term was more than 10 years, but I wished to put it low, and therefore I put it at that; I should have made this out sooner if I had time.

3556. As I understand you, Parliament will be breaking no engagement into which you have entered on the part of the Government if it defers the question of money till next year?—That is my understanding.

3557. Why, therefore, should Parliament pass this Bill?—Because if it does not pass this Bill the agreements will not be binding.

3558. Do not the agreements expressly say that if the Bill passes next year they shall be binding?—No, this Session they say.

3559. So that while Parliament may next year refuse to grant the money, you ask by this Bill that the present Parliament shall be committed to your proposal?—Yes.

The amendment moved by Mr. Goschen, that the words "taken on an average of the last three years" be inserted, was negatived by the Committee.

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Mr. *Goschen* moved that instead of the words "30th June 1868," the words "31st December 1867" should be substituted.

Mr. *Coates* objected to the proposed alteration on the ground that it would be unfair to take the nett profits of the company during the year ending the 31st December 1867, the trade of the companies being a perpetually growing trade.

The Committee deliberated.

The *Chairman* stated that the Committee had negatived the Amendment proposed by Mr. Goschen.

Mr. *Goschen* proposed after the words "so conveyed," to insert the words "provided that the sum to be agreed upon as the nett profits shall in no case exceed the amount of income upon which income tax shall have been last declared by the company before the 1st June 1868."

Mr. *Denison* objected to the proposed Amendment on the ground that it would be an alteration of the bargain come to with the companies.

Mr. *Bompas* also objected to the proposed Amendment, pointing out that it had been already negatived by a previous resolution of the Committee.

Edward B. Bright, Esq., called in; and further Examined.

E. B. Bright, Esq.

3560. Mr. *Goschen*.] COULD you tell the Committee the system upon which you make your declarations of income tax?—We make our declarations of income tax upon the average of three years' profits.

3561. Not three years' dividends?—Three years' profits.

3562. You do not look at your dividends?—No; I can only give our own practice.

Mr. *Denison*.] I do not know whether he has such a surplus as some of the Companies have.

3563. Mr. *Goschen*.] You do not take the dividends at all?—No.

3564. You take the average upon your three years' profits?—Yes.

3565. Therefore your declaration of income tax would represent what you consider your last three years' profits?—Yes.

3566. In making up that amount you take the profit of one year, the profit of another, and the profit of the third, and divide by three?—Yes.

3567. If you wanted to find the profits of 1867, your average of the three years would give those profits?—No doubt that is the system.

3568. Mr. *Denison* (*through the Committee*).] Have you any surplus profits beyond what they divide?—We have some surplus profits.

3569. You declare dividends upon those surplus profits, as well as upon those which you divide?—We should if the directors considered it desirable.

3570. Mr. *Norwood*.] You represent the Magnetic Telegraph Company?—Yes.

3571. Your accounts handed in the other day show no reserve fund; the accounts of the Electric Telegraph Company show a reserve fund?—We have a reserve.

3572. It is not shown in your account, is it?—Yes; the annual statements show it in each case from year to year.

Chairman.] It appears to me that this proposition is identical in sense, though not in terms, with the amendment which was moved about the three years' profits.

Mr. *Goschen*.] If the Electric Telegraph Company have also declared dividends, upon an average of three years, I will not press the amendment. (To Mr. *Grimston*.) Do you declare your profits on the average of three years, or on one year?

Mr. *Denison*.] They cannot; they have limited themselves to 10 per cent.; it is a different case altogether; they have a large surplus, which they

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they have hitherto kept back, and which they are now going to pay in back dividends, therefore the question would not apply to them.

Mr. *Goschen* (to Mr. *Grimston*).] How is the income tax made up in your company?

Mr. *Grimston.*] I do not know whether it is paid upon the dividend only, or whether on the profits.

Mr. *Goschen* withdrew the Amendment.

The following paragraph of the clause was read: "And in the case of the United Kingdom Company there shall be paid, in addition to the amount aforesaid, first, the price paid by the company for the patent of "Hughes' Type Printing Telegraph, such price not to exceed 12,000 *l.*"

Frank Ives Scudamore, Esq., called in; and further Examined.

F. I. Scudamore, Esq.

3573. Mr. *Goschen.*] WILL you tell us why that 12,000 *l.* is to be paid extra?—It was included in their valuation as a part of their means of earning prospective profits, and of course would be discounted from their prospective profits by the arbitrator when he took all the matter into consideration.

3574. You pay them the value of their share capital, reckoned on the highest quotation between certain days; would not that include the value of the assets they have got?—No, I hardly think it would, in their case; they have struggled some time; they are now beginning to do a valuable trade by means of this patent, in which they laid out a sum of money two or three years ago; they regard that as part of their power of earning prospective profits, for which the arbitrator is to give them something, and he no doubt would consider whether that ought not to be discounted.

3575. The highest quotation is to be paid them between the 1st and 25th days of June this year; can you explain how you fix upon that date?—I am inclined to think that that was rather against them than otherwise; that their shares had been higher prior to the 1st of June. The 25th of June was fixed upon because it was the day we were negotiating.

3576. Is that much higher than it was last year?—Yes, it would be higher than last year.

3577. And you do not apprehend that it was higher because it was expected to be purchased by the Government, and that in the purchase of that the value of Hughes' Type Printing Telegraph would be included?—I do not think that had been taken into account.

3578. You pay them, in the first instance, the sum they expect to get from the Government, and you pay them extra for a part of their assets?—I think the arbitrator would take that into account. I look upon it in this way, that that is simply giving them a minimum amount on account of their prospective profits.

3579. You give them three things; you give them the highest price between the 1st and 25th days of June, which was already a price supposed to include what the Government would give them for their prospective profits, then you pay them prospective profits over again, and then you pay them 12,000 *l.* for the patent?—I do not think the highest price between those days could be expected to contain anything the Government would give for prospective profits, because it was very much below par.

3580. *Chairman.*] They are earning nothing on the ordinary share capital?—No.

3581. You pay them 20 years' purchase on those shares that are paying?—Those net profits merely covered the preference shares and debenture debt, the ordinary shares are at a considerable discount.

3582. Mr. *Goschen.*] But the ordinary shares represent the assets of the company, whatever they are?—No, they represent simply what the public are disposed to give at that moment in the expectation of giving something more.

3583. You are not paying here for something twice over?—No, I do not think there is any risk of that.

3584. As it stands you appear to be paying for the assets separately, and then paying the value of the shares?—It looks like that, but in considering the prospective

spective profits they are to have, the arbitrator will take into consideration that we have been giving them something towards it.

3585. You consider that it would be a breach of faith on the part of the promoters, if they were to change that?—It would be a breach of faith on my part.

Mr. *Coates* proposed the insertion of the word "ordinary" after the word "quoted," which was agreed to by the Committee.

The following paragraph was read: "Thirdly—Compensation for the loss of the prospective profits of the company, and compensation for the efforts made by the company to establish an uniform 1 *s.* rate for the conveyance of telegraphic messages."

3586. Mr. *Goschen* (to Mr. *Scudamore*).] Was the patent of Hughes' Type Printing Telegraph, and other items, included in your original estimate of 2,400,000 *l.*?—No, I did not know anything about the price of Hughes' Type Printing Telegraph.

Mr. *Goschen* moved that the words "and compensation for the efforts made by the company to establish an uniform 1 *s.* rate for the conveyance of telegraphic messages" be omitted.

Mr. *Coates* objected to their omission.

The Committee after deliberation, negatived the motion of Mr. Goschen.

On the motion of the Chairman (agreed to by Mr. Coates) the words "and any sum that may be determined on in consideration of" (before the words "the efforts") were added to the Clause, in lieu of the words "and compensation for."

Paragraph 3 was read, and agreed to.

Paragraph 4 was read.

At the suggestion of Mr. Wyatt, the words "all the costs, charges, and expenses of and incidental to any and every such arbitration," were added to the paragraph.

The paragraph so amended, was agreed to.

Paragraph 6 was read, and agreed to.

Paragraph 7 was read as follows:—"Every officer and clerk of any company whose undertaking may be so purchased, who has been not less than five years in the service of Telegraph Companies, shall, if he does not accept any appointment offered to him, or if he receives no offer of appointment by the Postmaster General, receive during his life from the Postmaster General by way of compensation for the loss of his office from the time at which the Government take possession of the Companies Telegraph, an annuity, payable half-yearly, equal, if he shall have been in the service of Telegraph Companies 20 years, to two-thirds of the annual emolument derived by him from his office at the time of such conveyance; and with respect to any such person who has been in such service less than 20 years, the said annuity shall be diminished at the rate of one-twentieth for every year less than 20 years during which he has been in such service; such officers and clerks as enter into the service of the Postmaster General shall be entitled to count their past years of continuous service with the Telegraph Companies as years passed in the Civil Service of the Crown, and all such officers and clerks upon their appointment be deemed to be to all intents and purposes Government officers and clerks, and shall be entitled to the same, but no other privileges."

The *Chairman* moved that the paragraph should commence as follows: "Every officer and clerk of any company, the undertaking of which may be so purchased, who has been not less than five years in the service of the Telegraph Companies, and in the receipt of a yearly salary, shall, if he receives no offer of an appointment by the Postmaster General in the Telegraph Department which shall be deemed to be of equal value to the appointment held by him under any company."

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Mr. *Coates* objected to the Amendment, inasmuch as the paragraph he had read represented the bargain come to between the Post Office and the representatives of the companies, and stated that most of the officers of the company were in the receipt of monthly or fortnightly wages.

Mr. *Dudley Baxter* stated that he was present when the negotiation was carried on, and those who represented the companies stated that nearly all the servants of the companies were paid monthly, and even fortnightly, and that the words now in the paragraph were put in on purpose to meet their case, and were accepted by Mr. Scudamore. The letter to Mr. Scudamore was as follows: "Compensation to be given to officers or clerks who have been not less than five years in the service of the Telegraph Companies;" the words "yearly salary" being purposely left out, to which Mr. Scudamore added this memorandum, "The above is agreed to be added" (*reading the same*).

Mr. *Scudamore* stated that he did not understand that the words "yearly salary" were to be left out.

Mr. *Coates* stated that in the Electric Telegraph Company there were not 20 persons at an annual salary.

Mr. *Scudamore* stated that there was no specific question raised at the negotiations as to yearly salary.

Mr. *Dudley Baxter* stated that the companies assented to the proposition of the Post Office on the condition that they assented to this proposal of the companies in justice to their clerks.

Mr. *Davison*, on the part of the North British Company, stated that, in order to make the Clause applicable to the case of a gentleman employed in the telegraph business of the North British Company, he should propose to add those words, "or any railway company whose telegraphs have been open to the public."

3587. Mr. *Leeman* (to Mr. *Scudamore*).] Take a case which exists in my own city, where there is a telegraph office distinct from the telegraph office at the station; but at the railway station commercial messages are sent, and there is a telegraph clerk there who does the work both of the Railway Company and the Telegraph Company. Is not that clerk to be brought within the meaning of your clause?—That was not our understanding; we understood that that Clause only referred to the servants of Telegraph Companies.

3588. Though they may have been 18 years doing the work of the Telegraph Companies?—But we did not understand that such a clerk would be deprived of his employment.

3589. But if he was exclusively devoted to telegraph work?—If he was exclusively devoted to telegraph work that would be another case. I thought you put the case of joint work?

3590. No; I suppose him to be engaged exclusively in telegraph work?—If he was a servant of the Telegraph Company he would come within the Clause.

3591. Though acting jointly for the Telegraph Company and the Railway Company?—Yes; this case which Mr. Davison represents is a different case.

3592. That class of case I have now mentioned would be very extensive, would it not?—Yes.

3593. Mr. *Goschen*.] Do you understand this word "officers" to include directors?—Directors in the ordinary sense of the word, I understand, are not included, but an officer in the position of a salaried chairman, a salaried deputy-chairman would have a right to go before the arbitrator.

3594. Directors are not compensated?—A director payable by fees in the ordinary way we do not understand to come within thatClause.

3594. *Chairman*.] A managing director would come within it?—I think he would have a fair right to go before the arbitrator.

3596. Mr. *Goschen*.] Have you in your estimates allowed for the annual charge incurred under this clause?—I have.

3597. Under what head?—I have put it into the general lump of 6,000,000 *l*.

3598. Have you capitalised it?—Yes.

3599. You have not put it into the increased expenditure?—No.

3600. It

3600. It will be in annual payment?—It would be an annual payment due; but it will be in our power to capitalise it.

3601. *Chairman.*] You contemplate the necessity of taking on nearly all the staff of Telegraph Companies in order to work the telegraphs under the Post Office?—Undoubtedly.

3602. Therefore those gentlemen who are in the receipt of weekly or monthly wages will, for the most part, be employed under the Government?—That is my belief; I should think they would be absorbed with scarcely an exception.

3603. Therefore the alleged grievance is more of a sentimental grievance than a real one?—I will not go the length of saying that it is a sentimental grievance but I think it is rather fighting for a straw.

3604. In the case of those men in the receipt of weekly wages, if you take them into the service, they will be in a far better position than before as regards permanence of employment?—Yes.

3605. At present they are liable at any moment to lose their employment at the hands of the Telegraph Companies?—I presume so.

3606. That would not be the case if they were in the service of the Crown?—No.

3607. They would be in the same position as any other established servant of the Crown?—Yes.

3608. They would be virtually holding office during good behaviour?—Yes.

3609. Having as permanent employment as any civil servant of the Crown?—Yes.

3610. Mr. *Goschen.*] By "equal value," do you mean this, the same annual payment taking into consideration that the Government pays pensions, and the Telegraph Companies do not?—Certainly.

3611. *Chairman.*] That is the reason why you put in equal value?—Yes.

3612. Mr. *Goschen.*] Equal value would be such a salary as, taking into consideration the fact that the Government gives pensions, would be equal?—Yes.

3613. Mr. *Norwood.*] In the published accounts of the Telegraph Companies that were before us two or three days ago, there was a sum of 2,500 *l.* to divide among the directors for their remuneration; do you consider that they have any claim upon you in respect of that sum?—If any portion of that be in the nature of salary to the chairman or the deputy chairman, so far as that position is concerned he would have the right to go before the arbitrator.

3614. If the company votes at one of its general meetings that 2,500 *l.* should be set aside for the remuneration of their directors, those directors have a vested interest in that 2,500 *l.*, according to your view?—No, I do not think that; that is dependent entirely upon the pleasure of the shareholders from half-year to half-year.

3615. Has there not been any discussion between you and the parties upon this?—No.

3616. Suppose the gentlemen managing those companies are not paid by fees for attendance, but a fixed annual sum?—I do not understand that they are paid by a fixed annual sum.

3617. Mr. *Goschen.*] Have you inquired into that?—I understand that those sums vary according to the will of the shareholders; my view is that salary is the distinction.

3618. Mr. *Turner.*] The ordinary course is for a certain sum to be voted by the shareholders to the directors for their remuneration, with an understanding, in some cases, that the chairman is to have a certain amount out of that per annum; but it is only an understanding; it is voted, and it is divided by the directors in the way they think best; and sometimes they give the chairman 500 *l.*, sometimes 1,000 *l.*; sometimes other directors are paid so much a year, with the remainder in fees; but it is voted by the shareholders generally as a lump sum for the remuneration of the directors, there being so much allotted to the chairman?—Where it is dependent upon the pleasure of the shareholders it cannot be looked upon as a salary.

3619. Mr. *Leeman.*] The word used in this clause is "officers"?—Yes.

3620. You hold that that does not embrace directors?—I do.

3621. Not a managing director?—A salaried chairman, I think, would have a claim to go before the arbitrator.

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3622. Do you believe, from what you gathered in your negotiation with the Telegraph Companies, that is their view of the matter, that the word "officer" does not comprise directors?—I do not know whether it does or not; that has never been a question between them and me.

3623. Do you suppose that at this moment they will be excluded if this word be adopted?—Ordinary directors, in my belief, would be excluded.

3624. What is the understanding of the directors of the Telegraph Companies on the subject?—There has never been any question between the directors and myself on the subject; it is not a subject I could very well broach to them, and they have not broached it to me.

Mr. *Goschen* asked Mr. Coates what were the views of those representing the Telegraph Companies upon that point?

Mr. *Coates*, as representing all the companies, stated that they understood that the word "officers" excluded ordinary directors, but did not exclude a salaried director, who was sometimes called a managing director and sometimes chairman, but who was paid by annual salary.

3625. Mr. *Goschen* (to Mr. *Scudamore*).] Can you tell me what amount you have allowed for this in your estimate?—No; I must not do that, because of the arbitration.

3626. This is not a question of arbitration, is it?—All those questions go to arbitration.

3627. Is it a large sum?—No.

3628. You have estimated a sum on the basis of the exclusion of all except those with yearly salaries?—No, I did not take it in that way; I looked at whatever we should have to absorb, and then considered what proportion of the remaining salaries we should have to deal with.

3629. *Chairman.*] You calculated that we should absorb nearly all their staff?—Yes.

3630. And those we did not absord would be few that the amount would be very small that would be required to compensate them?—Yes.

Paragraph 7 was struck out, on the understanding that a new clause should be brought up in substitution of it.

Railway Companies' Clauses—

Clause 7 C was read as follows: "Whereas Railway Companies in the United Kingdom are for the most part either themselves owners of telegraphs which are used for the conveyance of public messages, and which are also essential for the safe conduct of the traffic on their safe undertakings; or they have contracts for various terms of years with Telegraph Companies, whose telegraphic apparatus is placed in the stations, and along the railways and canals of the Railway Companies, by which contracts provision is made with respect to the matters aforesaid, and whereas with certain Railway Companies agreements have been entered into by the Postmaster General (subject to the approbation of Parliament), which agreements are referred to in schedules to this Act, and it is expedient that with respect to certain other Railway Companies, namely, the London and North Western, the Midland, the Lancashire and Yorkshire, the Great Northern, the Manchester, Sheffield, and Lincolnshire, the North Staffordshire, the Great Eastern, the London, Brighton, and South Coast, the Metropolitan, the Metropolitan District, the Metropolitan and St. John's Wood, the North British, the Highland, the Sutherland, the Leven and East of Fife, the Glasgow and South Western, and the Great North of Scotland, the provisions hereinafter contained be made as to the undertakings belonging separately to the said companies, or held by them respectively on lease.

Mr. *Davison* proposed the following amendment after the word "North British" to insert the words "except as otherwise provided for by the agreement by this Act confirmed," stating that the understanding with the North British Company, when the agreement was come to with them, was, as he would prove by witnesses, that if any better terms were given to other companies, the same terms should be given to the North British Company, and compulsory terms having been given to other companies the North British Company claimed the same terms.

Mr. *Mason*; Examined by Mr. *Davison*.

3631. You are the General Manager of the North British Company?—I am.

3632. You communicated with Mr. Scudamore about this agreement?—Yes.

3633. Your company was the first company who did agree?—Yes.

3634. Your counsel took their seat on that side of the table the first morning of the meeting of this Committee?—Yes.

3635. Your company carry on telegraph business for the public?—They do to a considerable extent.

3636. Up to the end of last year, not to a considerable extent?—To a very little extent indeed; prior to the 1st of December, last year, we had very limited rights for carrying on telegraphic business; we had acquired under certain Amalgamation Acts from something like a dozen other companies certain very onerous rights under telegraphic agreements; we could not make anything of those, so we entered into negotiation with the Electric Telegraph Company to extinguish those agreements and to start afresh, and when we did start afresh we appointed a skilful telegraph superintendent, upon which we commenced to do business at a uniform rate of 1 *s.*, and we have continued to do that ever since.

3637. Has your business very much improved?—I believe the improvement has been to this extent: when we commenced our receipts were 400 *l.* a-year, and on the day I saw Mr. Scudamore to enter this arrangement I received advice from Scotland that our receipts were at the rate of 2,500 *l.* per annum. Since that time they have increased to 3,200 *l.* per annum.

3638. You saw Mr. Scudamore, and the agreement was entered into?—Yes.

3639. The basis of your agreement, and that in which it differs from the agreements of the other companies, is the receipts of a particular week?—Yes, Mr. Scudamore said, "We give you 20 years' purchase (we wanted 25) of your existing business." A little dispute arose as to what was to be the basis of that. I wanted 2,500 *l.* per annum, and Mr. Scudamore said, "But that is your highest week?" I said, "Yes, it is now, but it is sure not to be by-and-bye." I am borne out in that by the increase I have already mentioned. Mr. Scudamore said, "Very well, I will give it to you on that basis:" and we agreed upon that.

3640. Was anything said about the arbitrator fixing a sum as for a compulsory sale?—A great deal was said on my part. I said, "I am making this agreement with you, but what will happen if, in negotiation with the other companies upon the basis of my agreement, you should concede them other points?" Mr. Scudamore said, "I do not think that is likely." I replied, "I think it is likely." He said, "If it is so, I cannot expect you, as you have met me so fairly, to be placed in a worse position than any other company I may deal with." I may add, I said, "Well, I am satisfied with that, but it must be obvious to you, by coming now to settle with me thus early, I am placing myself in a worse position if I am not to get the benefit of the terms you concede to others; because it would be better for me to wait and come in with the rest." I may say, that since this conversation, I have had occasion repeatedly to refer to it in the presence both of Mr. Scudamore and Mr. Ashurst, and Mr. Ashurst has gone so far as to say, "If necessary, I will get into the box and confirm your opinion upon this particular point."

3641. Do you know that your agreement which was first entered into was used by Mr. Scudamore in his negotiations with the other companies?—The words, "North British" were scored out and the agreement was sent round to the other companies for them to form their agreements upon, and if you follow the agreements you find that very often verbally and always in spirit they resemble the North British agreement.

3642. But they have been added to by various companies?—Yes.

3643. There is a difference between these clauses and your agreement, is there not, upon that question of compulsory arbitration, and upon the compensation for clerks that would have to be removed?—Yes, and other small matters; there are two particular points: the first is as to whether we shall have compensation

Mr. *Mason.*

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for the loss of services of clerks paid jointly by ourselves and the Electric Telegraph Companies when they are taken away from the railway stations at which they are now employed; that is a principle that I have heard Mr. Scudamore affirm over and over again; in fact, so long ago as when he met several managers in Great George-street in April last, I put the point to him then, and I said, "If we have clerks at any one of our stations paid jointly by us and the Telegraph Companies, and you take the business away from our station, will you compensate us for the clerks being taken away?" He said, "Unquestionably."

3644. Your company contend either that you should have those extra terms put into your agreement, or that you should have such words as I propose, that would make this clause binding where it did not contravene, and was not altered by the agreement?—Yes.

3645. But it said, here are the words, "The North British," and somebody said you had consented, and told Mr. Wyatt that you had agreed to take this?—I can explain that; ever since these clauses were first framed, and agreed to by us, they have been altered every day, I am nearly sure, sometimes three or four times a day, so that really at last we did not know where we stood with them, and we said, "We will stand by the agreement."

3646. These clauses will not fit your case, "20 years' purchase of the amount of the net receipts (if any) of public telegraph messages received, and forwarded by the Railway Company on their own account, reckoned on the basis of the receipts derived therefrom over a continuous period of six months prior to;" if that was prior to any day that was past it would be unfair to you?—Yes, because it would take into account the period when our receipts were 400 *l.* a-year, and dilute the 3,200 *l.* which we are now fairly entitled to.

3647. Supposing the words were "six months prior to the 31st of December 1868"; it would not be giving you that which your agreement intended to give you, namely, the sum you are earning in excess of what you would be earning at that time?—Yes.

3648. But your agreement is based on a particular week in June, working out 2,500 *l.* per annum?—Yes, if they find fault with that we will take this week; we have not taken a week excessively in our favour, I say it is to the contrary, when we agreed we were upon 2,500 *l.*, and now we are upon 3,000 *l.*

3649. Has this clause been chopped about in all directions?—I do not know whether it is chopped about in all directions. I cannot conceive any more directions in which it might have been done.

3650. It has been repeatedly altered?—Yes.

3651. It is a close under the control of Mr. Blenkinsop, who represents the London and North Western, the Lancashire and Yorkshire, and some other big companies?—Yes.

3652. And who are not representing you?—No.

Cross-examined by Mr. *Rodwell.*

3653. Do you know how the words "North British" came into this clause?—I cannot say I do.

3654. Was not it done at the instance of the solicitor of the North British Company?—I believe it was put into that clause at the instance, as you say, of the solicitor of the North British, when the clauses were very different from what they are now, and when we were perfectly willing to accept them; but they have been altered since.

3655. You say that Mr. Scudamore said that you should be in no worse position than any other company?—Yes.

3656. Have you certain advantages in your own agreement?—We have no advantages in our agreement that we are not on the merits fairly entitled to.

3657. Have you advantages in your own special agreement?—It would be very strange if you had not.

3658. You have?—We have advantages peculiar to our own case, but no unfair advantages.

3659. You have special advantages?—Unquestionably.

3660. Those special advantages put you in a good position?—No, they do not put us in an unfair position.

3661. If you did not think there were some special provisions here with reference to other companies, you would have been content with your own agreement?

ment?—If the Post Office had not conceded to other companies more than they have conceded to us in similar circumstances, I would not have been here.

3662. Do you think that the other companies are in a better position than you are with your agreement?—I do.

3663. Why not come in with them?—You are assuming that all the companies are in those clauses; you have other agreements.

3664. I ask you distinctly, do you think those companies with whom you are associated are in a better position than you are?—Not on the whole, because they are not on all-fours with us.

3665. You want to take your own special agreement, and pick the plums out of each of the clauses, the parts applicable to the others?—I want nothing of the sort; if you look at the agreements—here is an agreement with the Caledonian; here is an agreement with the South Eastern; here is an agreement with the North Eastern, and here is an agreement with the Great Western.

3666. The South Eastern are not here?—I do not know what you have done with the South Eastern.

3667. They are not in the clauses. It is not that in the abstract yours is an unfair agreement, but you find certain provisions introduced to meet the circumstances of the other companies which would be advantageous to you?—I say, *primâ facie*, ours is an unfair agreement, because it does not carry out the premises.

3668. Will you give it up?—I will give up such portion of it as affects the basis of our income, if you will allow us to come in with the rest.

3669. Will you give up your agreement?—I have said that I am not willing to give it up, because it contains special provisions to meet our particular case.

3670. Is there any other company except yourself who want to take the benefit of a special agreement, and also the benefit of these clauses?—I cannot tell you that.

3671. Mr. *Goschen.*] Is the great special advantage which you have got, that there is a particular week, the receipts of which are to be taken as the basis of the calculation?—I can hardly consider that is a special advantage; that is a special point.

3672. Is the contention of the Promoters this, that because you have that special point you are to be put on worse terms as regards your clerks and some other points?—They profess to think that because they have conceded us what they have, that other advantages which they have granted to other companies under similar circumstances may be denied to us, and that in the faith of a special pledge from themselves.

3673. They want to set off the advantage you have got, of having the business taken at a time which was the only fair time to take, namely, when you had resumed your telegraphic business, as against other advantages which they give to other companies?—Yes.

3674. Mr. *Davison.*] When my learned friend talks about special advantages, you have no special advantage, have you?—No.

3675. The terms of your agreement are special, because of the special requirements of the case?—Clearly.

3676. When Mr. Scudamore said that you should be in no worse position than the other companies, are you in a worse position at this moment?—Undoubtedly.

3677. Can you turn that question of clerks into money, if necessary?—Undoubtedly, it involves some half dozen stations.

3678. It means money?—Yes.

3679. And the question of compulsory arbitration means a per-centage of money?—Yes, compulsory purchase was one of the things I stood out for, and I waived it because I conceived it might be debated in this Committee.

3680. As to special circumstances, you have a special case because you have been telegraphing for the public?—Yes.

3681. Here is a book with agreements relating to other companies, the Great Western, the South Western, the Chatham and Dover, and other companies, each of whom have special circumstances.

3682. Mr. *Rodwell.*] None of them ask to come under the general clause as well as yourself?—Give me the clause which you gave them and I will be satisfied.

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3683. Mr. *Davison.*] If they give you the clauses in the North Eastern agreement, and then the clause about the time upon which the receipts are to be calculated, that would do for you?—I should be satisfied with that.

3684. Mr. *Leeman.*] This is in your agreement, "Fourth. Such sum as shall be agreed upon, or in default of agreement, as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of granting way-leaves, and making arrangements with other Telegraphic Companies on the North British system"?—That is so.

3685. That is the same as in the agreement with the other companies?—It may be so.

3686. But the other companies have in addition to that a right to ask for compulsory sale?—They have.

3687. And it is just that which you say you ought to have?—That is one of the things I certainly want to have.

3688. You say that that was promised to you if it were given to other parties?—Unquestionably.

[The Witness withdrew.

Mr. *Adam Johnstone*, called in; and Examined by Mr. *Davison.*

Mr. *A. Johnstone.*

3689. You are Solicitor of the North British Company?—I am.

3690. I want to put to you one question upon that which the Honourable Member for York put to the last witnesses. You have given up your way-leaves for 50 years to the Post Office?—We had an agreement with the Electric Telegraph Company for 50 years, by which they had a right of way, and we have abandoned the objection to assign in favour of the Postmaster General.

3691. Therefore they can assign to the Post Office, and you take no power to take anything for it under this agreement?—Yes.

3692. The other companies, on the other hand, do?—Yes,

3693. How was it that the name of the North British got in?—It got in with reference to these clauses I have in my hand. An opinion was expressed to me by Mr. Ashurst that it was very desirable that all the companies should concur in the general clauses in place of scheduling the agreements; and I adjusted the clauses with him as in this copy which is initialed by Mr. Ashurst. The name of the North British is put in the Preamble for the first time in this set; and paragraph 6, under letter A., reads thus; "20 years' purchase of the annual amount of the whole receipts (if any) of public telegraph messages received and forwarded over the wires, belonging to or rented by the Railway Company, reckoned on the basis of the receipts derived therefrom over a continuous period of six months prior to the acquisition by the Post Office of the business of the Electric Telegraph Company." This is the addition agreed to: "or in the case of any Railway Company possessed of a telegraph open to the use of the public as aforesaid over a continuous period of six months prior to the notice given by such company requiring the Postmaster General to purchase their telegraphic undertaking under the provisions of the 7th section of this Act." And then, under letter (*b.*), "20 times the amount of the estimated annual increase, calculated upon the average increase of the preceding three years of the said receipts from telegraphic messages, including new lines and new stations on existing lines, or where the business has been commenced within three years, calculated upon the increase during such shorter period; such annual amount in case of difference to be settled by arbitration." We have had these clauses changed almost daily, and yesterday morning, we found it in this stage.

3694. Before we go to the state of the clause yesterday morning, when was it in that state?—We concurred in the insertion of the North British.

3695. With whom?—With Mr. Ashurst.

3696. Has it Mr. Ashurst's signatnre?—Yes; and it also had the concurrence of Mr. Blenkinsop.

3697. That was when?—Several days ago.

3698. That would have met your case?—Yes, we had the option of giving notice under this clause, and this clause enabled us to fix the period when we thought fit.

3699. It

3699. It would have enabled you to fix a period six months' hence, or six months from the Bill passing, which would give you better terms than under the agreement?—Yes.

3700. That Mr. Ashurst agreed to, and Mr. Blenkinsop signed it, and there it stood; and you were satisfied. Let us see how it stood yesterday morning?—Yesterday morning it was entirely changed, and it stood in this way. "The Postmaster General shall pay the Railway Company the following sums by way of compensation: 20 years' purchase of the amount of the net receipts (if any) of public telegraph messages received and forwarded by the Railway Company on their own account, reckoned on the basis of the receipts derived therefrom over a continuous period of six months prior to," and (*b*) ran in this way, "20 times the amount of the estimated annual increase, calculated upon the average increase of the preceding three years of the said receipts from telegraphic messages, or where the business has been commenced within three years, calculated upon the increase during such shorter period; such annual amount, in case of difference, to be settled by arbitration." On seeing this, I refused to allow the North British to remain in.

3701. Did you see if you could make that clause fit your case in your desire to accede to that which the Promoters wanted, namely, that you should come into the general clause?—I abandoned the attempt.

3702. You tried?—I made the attempt and found that it was impossible.

3703. And you said that you must go in for your agreement?—Yes.

3704. On looking through the terms given to the other companies, did you find there were terms in excess of those given to you?—Yes.

3705. Did you negotiate with Mr. Scudamore the terms of the original agreement?—No; I was present at the last meeting. I can confirm Mr. Mason in the statement he made with reference to the advantages to be given to other companies; it was repeated there that in the event of other companies, after the date of our agreement obtaining greater advantages, we should have like advantages.

3706. Do you swear that?—I do; there is no question about it. There are various parties present who can confirm what I have stated.

3707. Who else were present?—Mr. Mason, his shorthand clerk, the manager of the telegraphs, and Mr. Ashurst.

3708. Were they there?—Yes.

Chairman.] Are the facts disputed?

Mr. *Scudamore.*] I deny it entirely.

Cross-examined by Mr. *Rodwell.*

3709-10. Taking it as a whole, are you satisfied that the companies who are included in this general clause are in a better position than your company?—No; the provisions in these clauses are not applicable to the case of companies who have telegraphs of their own. Those companies mentioned in the clauses are all companies who do not work telegraphs of their own, as I understand; and in every case where a company has a telegraph of its own open to the public for payment, it has been found necessary to have a special agreement.

3711. Mr. Scudamore undertook this, that you should not be in a worse position than any other company, is that what you understood?—Most undoubtedly.

3712. Are you prepared to say, looking at it as a whole, that the companies who come in under the general clause are in a better position than your company, under the agreement?—I think they are, because of various provisions, they have that we have not; but the proper comparison is not with the clauses, but with the agreements that have been conceded to the South Eastern, and to the North Eastern, and other companies, who are in a like position with the North British.

3713. The South Eastern are not scheduled in this clause?—No.

3714. As these agreements with the other companies have varied from day to day, you have been picking out all those portions of the agreements which will benefit you, without having regard to the position of each of those companies as a whole?—No, we were quite satisfied with one or two leading alterations, such as those Mr. Mason has named. The element of compulsory sale being taken into

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account in the acquisition of way-leaves, and the payment for the loss sustained by the absence of the telegraph clerks from our offices, those were the principal, there were one or two union points.

3715. You varied your demands day by day as the clauses were altered?—No.

3716. Have you always from the first insisted upon those?—We always insisted upon the same terms we insist upon now. About 10 days ago, so soon as I saw the general terms proposed to be given to the Railway Companies, I sent a draft agreement to Mr. Ashurst, embodying the additional advantages, which we insisted upon in consequence of the additional advantages which Mr. Scudamore had conceded to other companies, and we have never varied from that.

3717. You were asking for those additional advantages, because other companies have got them as part of their agreement?—Yes.

3718. Mr. *Davison.*] You believe that you are entitled to them?—Yes, the agreement would not have been entered into but for that.

3719. Mr. *Goschen.*] Has the increase in your telegraphic business been in competition with other companies?—Yes.

3720. Mr. *Leeman.*] What is it that you want that is contained in the Railway Companies' agreements?—We want the compulsory sale in reference to all cases where we claim compensation for way-leaves.

3721. Mr. *Davison* (*through the Committee*).] Have you a letter in your pocket from Mr. Ashurst, of yesterday's date, on this subject?—No, I have a memorandum from Mr. Ashurst, proposing the very thing we ask.

3722. *Chairman.*] Under what circumstances did you come by that memorandum?—To prevent any question arising before the Committtee, I laid before Mr. Ashurst a draft agreement similar to this in my hand, and as there was not time to adjust it, I proposed to put this memorandum upon it.

3723. Who drew the memorandum up?—Mr. Ashurst.

3724. When?—Within the last hour, upon the understanding that the printed draft agreement contained no more than it provides.

Mr. *Davison.*] I hear Mr. Scudamore say that it is not right to read it. If it is not right, I will not proceed to produce it; I thought it was something that might be produced. If Mr. Scudamore has a different view, I will not press the question. I had put it to Mr. Ashurst, and he had no objection, but Mr. Scudamore, who was not consulted about it, seems to have no objection, and if so, I will not use it.

Mr. *Scudamore.*] I only mean that I have not had time to read it.

3725. Mr. *Davison.*] I believe if Mr. Scudamore had had time to read it we should not have troubled the Committee on it at such length (To the *Witness*). Will you read the memorandum?—"On the understanding that the printed draft agreement contains no more than what is provided in favour of the Railway Companies who have not agreements referred to in the schedule, plus the special agreement as to the basis upon which the calculation of profits whereof the North British Company are to have 20 years' purchase, I consent to substitute it for the existing agreement——

Mr. *Davison* stated that that was what the North British wanted.

Mr. *Scudamore* stated that if this matter could be left until to-morrow, no doubt it would be settled this evening.

Mr. *Davison* stated that he was quite willing that it should stand over.

3726. Mr. *Leeman.*] The words in your agreement are these: "Such sum as shall be agreed upon, or, in default of agreement, as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of granting way-leaves and making arrangements with other Telegraphic Companies over the North British system." The words which the other companies have got are these: "Such sums as shall be agreed upon, or, in default of agreement, as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of granting other way-leaves and making future arrangements with telegraph or other companies, and in respect of granting a monopoly to the Postmaster General for the conveyance of telegraphs over their railways, as herein provided for." Are those the words you want, and these: "The arbitrator in determining the amounts to be paid to the Railway Company under this

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this Act shall have regard to the agreements which subsist between the Railway Company and any Telegraph Company, and also to a compulsory sale being required from the Railway Company" ?—Precisely.

3727. You are an old railway lawyer, and have had to do a great deal in making compulsory purchases?—Yes.

3728. Is not it the fact that it makes a very large difference indeed in settling the terms, by an arbitrator, of the subject matter upon which he is to arbitrate, whether it is an agreement sale or a compulsory sale?—A very great difference; the difference is between 30 and 50, 55 and 60 years' purchase.

3729. That is what you wish to secure for the North British, it having been given to all the other companies?—Yes.

[The Witness withdrew.

Frank Ives Scudamore, Esq., further Examined.

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3730. *Chairman.*] Do you accept the preceding witnesses' statement of what passed?—No, I do not.

3731. Where do you differ from them?—I was asked by the North British Company, and by the Caledonian Company, whether they should not have a favoured nation clause; those words were used, and I said "No," distinctly; certainly, in conversation with Mr. Mason, he did say, "If you give 25 years' purchase to any other company, will you give that 25 years' purchase to us." My answer was, "You need not entertain that question at all, because we shall not give 25 years' purchase to any company. I do not recollect his ever having asked me whether, if we gave compulsory sale to another company we would give it to him; if he had asked me I certainly should have refused to do it.

3732. What was said as to what was to be done if other companies got better terms?—To the best of my belief nothing was said about it; I had no reason to suppose at that time that other companies would get better terms; my object was to endeavour to get them to come to the same terms; I decidedly never promised that whatever terms we gave other companies we would give to them; I have said this very frequently since; we thought they had helped us very considerably, and I always said we did not want to have them in a worse position than any other company.

3733. Mr. *Goschen.*] What do you mean by saying to give them compulsory sale?—Mr. Mason, in the original draft of proposals which he gave to me, and which I took to the Chancellor of the Exchequer, had proposed that they were to have 20 years' purchase of their existing right, plus their prospective profits and plus whatever our arbitrator would give for compulsory sale; I took it to the Chancellor of the Exchequer, who struck out the compulsory sale, and Mr. Mason, with some reluctance, agreed to that, but not upon the understanding that if any other company got it he was to have it.

3734. You have granted it to other companies?—Yes.

3735. Compulsory sale, besides 20 years' purchase, and besides the increase?—No, it is not put in that way. Taking the railway clauses, you will find a great many items that have to be taken into account; there is give and take on both sides, through a considerable number of clauses, and the arbitrator, not in considering any one of those things, but in considering all, is to have regard to existing agreements; that as to what we sacrifice or what they sacrifice by giving up existing agreements and to compulsory sale.

3736. Mr. *Turner.*] When you had that conversation in which you made use of the phrase that you did not wish the North British Company to be in a worse position than any other company, was that before or after you made the arrangement with the North British Company?—Long after, in the course of this present week.

3737. Therefore, it was not an observation made use of for the purpose of inducing the North British Company to enter into the agreement with you?—Certainly not.

3738. As I understood you to say, you were acknowledging the service the North British Company had been to you, and you said that you never wished that they should have been in a worse position than any other company?—I have always said that I should be glad that they should be in as good a position as any other company.

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3739. That remark was not made with the view of inducing the North British Company to enter into the agreement?—Certainly not.

3740. You had no reason to suppose that any observation you made long after the agreement was made would be brought forward as a pretext for altering the agreement made long before the observation was made?—No.

3741. Mr. *Davison.*] You think it fair that the North British should have as good terms as any other companies?—Yes, I think it is fair.

3742. And that taking into consideration the fact that they are a company working for the public?—Yes.

3743. They have a special agreement?—Yes.

3744. And that agreement fixes the basis of their compensation, viz.: 20 years' purchase of a rental calculated upon the receipts in a particular week?—Yes.

3745. Subject to their proving that their receipts work out 2,500 *l.* a year?—Yes.

3746. Do you think that fair?—Undoubtedly.

3747. You think that special term of taking a week, is a fair mode of arriving at the value as between the North British Company and the Post Office?—Yes.

3748. And you think it is not fair to take six months prior, say to the 25th of July, or six months prior to the 31st of December last year; one would be against the Post Office, and the other would be against the company?—Yes.

3749. You heard Mr. Mason say that they are receiving more now than they did at the time when the agreement was made?—Yes.

3750. You think you have given the North British a fair term, but you have given to the other companies the terms of compulsory purchase, which the arbitrator is to take into consideration?—That item is included amongst others.

3751. Will you explain to the Committee why the other companies should have it, and not the North British Company?—I am not prepared to say at this moment why the North British Company should not have it; we have endeavoured very anxiously to get them into clauses; what I did object to was, being asked to say in five minutes, that we would agree to that paper, when I did not know how it would affect half a dozen cases that would be brought against me afterwards.

3752. As to clerks, you think they should have as the other Railway Companies have got it?—Generally speaking, what is fair for the other Companies is fair for the North British Company.

3753. Mr. *Goschen.*] Is the North British Company the only company which has not got the compulsory sale?—The Caledonian Company has not.

3754. Mr. *Davison.*] Would you prefer to alter the agreement, or would you prefer saving their rights under this clause?—I must ask the agent to say what effect the one course or the other would have.

3755. It should be done one way or the other?—I should like to have them placed on equal terms.

3756. I only want this:—"On the understanding that the printed draft agreement (that is the agreement that we have proposed) contains no more than what is provided in favour of the Railway Companies who have not agreements referred to in the schedule, plus the special provisions rendered necessary upon the North British agreement with the Electric Telegraph Companies being cancelled."

Mr. *Ashurst.*] That is not mine; you are reading pencil.

Mr. *Rodwell.*] Somebody else has written that; you are reading words which are the emendation of your own clients.

3757. Mr. *Davison.*] I am trying to get Mr. Scudamore to go with me "on the understanding that the printed draft agreement contains no more than what is provided in favour of the Railway Companies who have not agreements referred to in the schedule, plus the special provisions rendered necessary upon the North British agreement with the Electric Telegraph Companies being cancelled, and plus the special agreement as to the basis upon which the calculation of profits whereof the North British Company are to have 20 years' purchase," I consent to substitute it for the existing agreement. Do you see my reason to object to that.

Suppose

Suppose we bring an agreement with those terms in it, would you consent to that?—I really cannot undertake to say yes, till I know how I am situated.

3758. Mr. *Leeman.*] Does not it come to this, that all your grievance arises from the mode in which the thing is to be done. You do not object to putting in the North British Company, and you do not object to giving the North British Company a clause as to compulsory sale?—I cannot answer you.

3759. You have given it to everybody else?—Yes.

3760. Why should not the North British Company have it?—I think myself that they ought to have it.

3761. If they are to have it with regard to compulsory sale, there is nothing else that you would withhold from them?—No, not speaking for myself.

3762. The compulsory sale would be valuable to them?—It would make a difference, no doubt.

Mr. *Davison.*] It seems to be conceded that the only question is, how it is to be done.

Mr. *Turner.*] Mr. Scudamore says that the conversation in which he wished that the North British Company should not be in a worse position than any other company, took place long after the agreement with the North British Company. Am I to understand that the North British witnesses allege that that conversation took place before the agreement was made?

Mr. *Mason.*] I say distinctly that it was mentioned at the time that Mr. Ashurst and Mr. Scudamore and myself and Mr. Johnstone, the solicitor to the North British, were preparing the draft of the agreement; Mr. Simpson, the conveyancing counsel, was also present.

Chairman.] You say before the agreement was entered into.

Mr. *Mason.*] While it was being drawn. Mr. Scudamore must have forgotten it.

Mr. *Leeman.*] Irrespective of that, Mr. Scudamore says he thinks they ought to have it.

Mr. *Rodwell.*] The question is what?

Mr. *Leeman.*] "Compulsory sale."

Mr. *Davison* proceeded to comment upon the evidence.

Mr. *Scudamore.*] I must say this in justice to your clients, the Chancellor of the Exchequer has reminded me of some words which I used to him which I had altogether forgotten, which make me think it probable that I may have forgotten using words to the effect which has been represented by the North British witnesses.

Mr. *Davison* stated he would be content if the Promoters would undertake to put what the North British Company required into their agreement.

Mr. *Scudamore* stated that he would undertake to do so.

Mr. *Leeman* suggested that the Caledonian Company must be put on the same footing.

Mr. *Scudamore* stated that the Caledonian Company must be on the same footing.

The words "North British" were struck out of the clause, and the preamble of this clause and paragraph 1 were agreed to.

The following paragraphs were read: "On such acquisition as aforesaid all the posts, wires, instruments, and other telegraphic apparatus belonging to the Railway Company, and also all posts, wires, instruments, and other telegraph belonging to the Telegraph Companies on the Railway Company's lines and canals, which are necessary for establishing a complete system of telegraphy in connection with the working of trains, and the traffic of the lines and canals shall become the absolute property of the Railway Company, and shall be handed over to them by the Postmaster General, free of

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charge, in efficient working order; so that the Railway Company may be in a position at once to take up and carry on their own telegraph work on their own system; and thereafter the said posts, wires, instruments, and other telegraphic apparatus, shall be maintained and worked by the Railway Company. On such acquisition as aforesaid, the Postmaster General shall be entitled to use, from telegraph stations not on the lines of railway, all the wires belonging to the respective Telegraph Companies on the line, and employed exclusively in the transmission of the public telegraph business, which are erected on the poles to be handed over to the Railway Company under paragraph 2; and he, at his cost, shall also be entitled to call upon the Railway Company to erect and maintain additional wires on the said poles, provided they are sufficiently strong and high for the purpose: and also to erect new poles at places to be agreed upon, with wires over any of the lines and canals of the company; but so that such new poles shall not interfere in any way with the convenience or working of the railway or canals of the company, or obstruct the working of the traffic thereon. The Railway Company shall maintain all the posts and wires used for public messages, the Postmaster General paying for the same as may be agreed or settled by arbitration."

3763. Mr. *Goschen* (to Mr. *Scudamore*).] Will you state what the effect of that is?—The effect, briefly, will be this: that whereas the Telegraph Companies, as a general rule, are maintaining a separate system for the Railway Companies, which is in a great degree worked by the officers of the Railway Companies themselves. The Telegraph Companies will hand over that system to the Railway Companies immediately, instead of waiting till the expiration of the agreements to hand it over, and from that time they will be relieved of the maintenance of such portions as they now maintain. That is the effect of the first part, viz., paragraph 2. Then, with regard to paragraph 3, which begins in this way, "On such acquisition as aforesaid the Postmaster General shall be entitled to use from telegraph stations not on the lines of railway all the wires belonging to the respective Telegraph Companies on the line." That means this, that the Railway Companies do not wish to have us as joint occupants at the railway stations; they have no objection that our wires shall be on their lines of railway, and they say, "entitled to use from telegraph stations not on the lines of railway" in order to shut us out from their own stations.

3764. *Chairman.*] Your wires will run to the post offices, and not to the old telegraph stations?—Yes.

3765. Mr. *Potter.*] How is the telegraph to be worked from station to station?—That is provided for presently; it is to be done by the officers of the Railway Companies on our account, we paying them a proportion of the message.

3766. That is only from station to station on the line?—Yes.

3767. Mr. *Goschen.*] What is the meaning of these words in paragraph 3: "All the wires belonging to the respective Telegraph Companies on the line, and employed exclusively in the transmission of the public telegraph business." Does that mean that they are not to employ wires partly employed for railway purposes?—Yes; wherever there has been a joint occupation of a wire, that wire is to go over to the Railway Company, so that the Railway Company may have the absolute means of protecting its own trains and traffic.

3768. *Chairman.*] The principle of all these clauses is this: entire separation between the railway wires and the Government wires?—Yes.

3769. Mr. *Goschen.*] It is not expressed distinctly; but the effect is that there are certain wires which would be exclusively in the hands of Railway Companies?—Yes, and which practically over the greater part of the mileage are in the hands of Railway Companies at this moment.

3770. Those joint wires are not to be used from railway stations, but to be used from the post-office stations?—We are only to work in our own stations; where we want any work done in railway stations, it is to be done by them for us, so that there should be no joint occupation.

3771. These joint wires have been always hitherto used for public telegraphs?—Yes, in some cases; railway messages having priority, the railway messages would continue to have priority. I think that the other paragraphs explain themselves. If we want to put additional wires on the posts of the railway system, we may require the railway company to do the same at our cost, at arbitration; in all likelihood it would be at cost price. Paragraph 4 is only a clause

of

of the same kind; it merely divides the maintenance of the posts between us and the Railway Companies in proportion to the burden which we have put upon the posts.

3772. Then Paragraph 5?—That is in all the agreements with the Telegraph Companies. It is necessary that the Railway Company should have the power of shifting the posts which might interfere with their traffic.

Paragraphs 1 to 5 were agreed to.

Paragraph 6 was read, as follows:—"The Postmaster General shall pay the Railway Company the following sums by way of compensation:—(*a*). Twenty years' purchase of the amount of the net annual receipts (if any) of public telegraph messages received and forwarded by the Railway Company on their own account, reckoned on the bases of the receipts derived therefrom over a continuous period of 12 months prior to the 31st day of December 1868."

Mr. *Goschen* proposed that the words "31st December 1867" should be inserted.

At the suggestion of the Chairman, the words "30th of June" were inserted, and the paragraph, so amended, was agreed to.

The following paragraph was read:—"(*b*) Twenty times the amount of the estimated annual increase, calculated upon the average increase of the preceding three years of the said receipts from telegraphic messages, or where the business has been commenced within three years, calculated upon the increase during such shorter period; such annual amount, in case of difference, to be settled by arbitration.

3773. *Chairman* (to Mr. *Scudamore*).] Why, in the case of the railways, is the annual increase to be paid for, and not in the case of the Telegraph Companies?—The Railway Companies are assumed to have a more permanent interest in their property than the Telegraph Companies.

3774. Mr. *Goschen.*] Why a more permanent interest?—It is possible for the Railway Companies at any time to turn the Telegraph Companies off their road, but the Railway Companies cannot be turned off the road by anybody else.

3775. When you were examined upon the danger to which Electric Telegraph Companies were liable, that was treated as no risk at all?—Yes, and I hold that opinion still in the case of the Railway Companies; it is not a matter of opinion, it is a matter of absolute certainty.

3776. There being no practical risk in the case of the railways, and there being a certainty in their case, do you consider that they are entitled to 20 years' purchase of the annual increase?—I think it is a considerable concession to the Railway Companies, but we hope to get something out of them on the other side.

3777. *Chairman.*] Under what head?—Under the whole of the heads; when we come to arbitration, we hope that all we have given to them will be taken into account.

3778. Those are general clauses to include all companies, this has reference only to those companies who do public telegraph business, and would not apply to companies who grant way-leaves?—At the meeting with the railway managers, at which those heads of agreement were drawn up, there was only one railway represented which did any public business. It was a meeting of a great many railway managers, and only one was doing any public telegraph business, and that only on a small portion of its line.

3779. How is that with regard to some of the southern lines; do they do a large public telegraph business?—The South Eastern does a considerable business.

3780. Mr. *Potter.*] Do you know the amount?—I believe it is about 6,000 *l.* a year; they erected the telegraph themselves.

3781. Have you any agreement with them?—Yes.

3782. In paragraph D you give compensation for the loss by the Railway Company of the privilege of granting other way-leaves and making future arrangements with telegraph or other companies, that is besides the 20 years' purchase of the annual increase from the business of public telegraphy?—Yes.

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3783. *Chairman.*] You would not give both?—I look upon those clauses taken together as a statement by the companies of the rights the companies have, and the arbitrator is to say what those rights are, looking at them as a whole.

3784. It is not that each of those companies have each of those rights; some would come in under Clause B, and some under C and D?—Yes.

3785. Mr. *Goschen.*] And some under all?—Possibly.

Mr. *Goschen* moved the substitution of "ten times" for "twenty times."

Mr. *Coates* objected to the proposed amendment.

The Committee deliberated.

The *Chairman* stated that the proposed amendment had been negatived by the Committee.

Paragraph C was read as follows: "All rents and annual or other payments payable to the Railway Company by public Telegraph Companies during the still unexpired periods embraced in their respective agreements, and at the terms mentioned in said agreements respectively."

3786. Mr. *Goschen* (to Mr. *Scudamore*).] Are the rents and annual and other payments to be capitalised?—I expect the net result will be capitalised, not the sums payable under each of those clauses, but the net result that will be arrived at by the arbitrator after taking everything into consideration on each side.

3787. *Chairman.*] As the words stand it would be an annual rent?—It might.

3788. But it will be open to compound?—Yes.

3789. Mr. *Goschen.*] It is quite clear that they will not count the public telegraph messages over again?—Decidedly, that is not the intention.

The paragraph was agreed to.

Paragraph D was read.

Mr. *Goschen* moved its rejection.

The Committee agreed to the paragraph.

Paragraph E was read, "Such sums as shall be agreed upon, or in default of agreement as shall be settled by arbitration, as the value of the Railway Companies reversionary interest (if any,) in the telegraph receipts from public messages on the expiration of the agreements with the respective Telegraph Companies, as well as the amount of the sum payable to the Railway Company in respect of the estimated increase of revenue from public telegraph messages on such sections of the line."

3790. Mr. *Goschen* (to Mr. *Scudamore*).] Will you explain why that is not covered by paragraph A and B?—This applies to quite a different right. A and B apply to an existing right, the right which some companies have at this moment of sending public telegraph messages on their own account, but (*e.*) applies to the right which they might have at the end of the agreements with the Telegraph Companies of setting up a trade.

3791. Does not the 20 years' purchase of the annual increase cover that?—The same company could not come in under both those clauses. Take the South Eastern with a public trade (the London and North Western has no public trade); the South Eastern cannot sell us its public trade now and sell us some public trade that it is going to acquire hereafter, because it has got all it can possibly acquire. The London and North Western Company is only to sell the reversionary trade that it might be able to set up at the end of the term of its agreement.

3792. Mr. *Leeman.*] Under this agreement, take one of those seven years' companies; you will have to pay them 20 years' purchase in respect of their present interest, and under this clause you will have to pay them such a sum as the arbitrator shall settle to be given to them at the expiration of the agreement in respect of their reversionary interest?—Yes.

3793. *Chairman.*] This compensation clause is taken from the Caledonian agreement?—Yes, one part of the Caledonian agreement is as follows: "Such sums as shall be agreed upon, or, in default of agreement, as shall be settled by arbitration, as the value of the Railway Company's reversionary interest in the telegraph

telegraph receipts from public messages on certain sections of their line on the expiry of the agreements with the respective Telegraph Companies, which prevent the Railway Company at present from earning revenue from this source, as well as the amount of the sum payable to the Railway Company in respect of the estimated increase of revenue from public telegraph messages on such sections of the line."

3794. Is not it the case that the Caledonian Company was a company doing telegraph business on the greater part of the line?—Yes.

3795. But it had granted way-leaves, or had made agreements with Telegraph Companies for doing telegraph business on certain sections of its line?—Yes.

3796. Therefore, the Caledonian Company was a company which, at the expiration of those agreements, might be expected to carry on telegraph business on all its lines?—Yes.

3797. A Company not at present carrying on Telegraph business would not be in the same circumstances as the Caledonian Company?—Not precisely in the same circumstances.

3798. Ought not this clause to be restricted to those companies which are in the same circumstances as the Caledonian Company?—I think not.

3799. I mean the heads of agreement says, "Caledonian compensation clauses to be included where applicable;" but if you apply this compensation clause to a Railway Company not doing any telegraph business, can you say the clause is applicable?—Yes, I think it is; that part of the Caledonian agreement referring to those sections of their lines on which they have no telegraph business at present is, I think, applicable to the case of a company having no telegraph business on any part of its line. That certainly was the understanding between myself and the railway managers.

3800. Mr. *Coates*.] The words "on such sections of the line" ought to come out; they are printed by mistake——

Chairman.] I think "certain sections of the line" was in the original heads of agreement?—

No; in the agreement it is "Caledonian clauses to be adopted where applicable;" Mr. Coates is right; "on such sections of the line," at the end of Clause E ought to come out.

3801. But, with regard to such sections of the line in the Caledonian agreement, I believe this is the case, that the heads of agreement with the Caledonian Company contain the words "such sections of the line"?—Yes, undoubtedly.

3802. And that part of the agreement with the Caledonian Company had reference to the circumstances of that company as doing the telegraph business?—That is quite so; at the same time, I am bound to say that in agreeing with the railway managers, that the Caledonian compensation clauses should be included where applicable, it was my idea that part of the Caledonian arrangement was applicable to the case of such a company as the London and North Western, which has no telegraph business at this moment.

3803. How can you put the two companies on a par, one company doing public telegraph business, and the other not?—It is merely a difference of degree not of principle.

Mr. *Blenkinsop* stated that it was only under this clause that the London and North Western Company would get any money whatever for their reversion. That at the end of their agreement they had an interest in telegraphic business, because they could turn the existing company out; they could sell their reversionary interest to another company, their reversionary interest being in the goodwill.

3804. Mr. *Goschen* (to Mr. *Scudamore*).] When you told me that the Electric Telegraph Companies were not subject to any competition, did you think of the competition that the railways might make?—Yes, I did, undoubtedly.

3805. You told me that there was no competition conceivable?—I said, practically, I thought competition impossible.

3806. Why should not competition arise in this way, as it is arising now in the North British, and from the claim of Railway Companies to establish telegraphs themselves?—For this reason, all that Mr. Blenkinsop could do at the end of

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of his term would be to turn the telegraphs on to the roads; he could not snuff them out of existence altogether; in order to do the business they are doing, he must set up fresh wires; he would not be acquiring the whole business, he would draw off only such portion of it as he could draw away from them; for that reason his reversionary right is not so valuable as he supposes it to be, and I have no doubt whatever that the arbitrator will discount it by those probabilities.

3807. Take the London and North Western. The London and North Western at the expiration of this agreement might monopolise, as far as the Telegraph Companies are concerned, the business between London and certain towns?—No, I do not think that they could do anything of the sort; they could by no means get the whole business, because the Telegraph Companies would know, say two years before, what was going to happen, and they could put wires and posts on the public roads, and keep a large portion of the trade.

3808. Mr. *Leeman.*] Why should not the London and North Western run down to sixpence?—Then the Telegraph Companies would go to sixpence, too.

3809. Mr. *Goschen.*] They are exposed to competition; the railways could not drive them out of the field, but they could take half their business?—They could force the Telegraph Companies to give them somewhat better terms than they now do; that would be the extreme result of any negotiations between the Telegraph Companies and the Railway Companies.

3810. Mr. *Leeman.*] Having the power, as the Railway Companies would have, to combine and compete with you, is not that an element of value to put before an arbitrator; does not that constitute their real value before an arbitrator that their reversion will be valuable in respect of the power they would have in combination to compete with the Post Office over the whole district of country between this and the Tweed?—I should be very glad if they put it on that footing before the arbitrator, because we could beat them.

3811. Is not that the meaning of the clause now before the Committee, that you have placed yourselves by the agreements in that position?—No, I do not think it is; I think, as I already stated, this, as one of certain clauses setting forth deferred rights, the arbitrator, in taking into consideration those deferred rights, is to take into account all our sacrifices as well, and all the circumstances that would make those deferred rights not so valuable.

3812. Would not the arbitrator be pressed on the part of those companies who could combine, as I have shown you (those companies having short terms), with the fact that those companies could, at the end of five or seven years, compete with you through the whole of the heart of England?—Could have competed with us?

3813. No; could compete then unless you agreed with them and bought them; could they not at that time compete with you for the whole of the heart of England, and if they did not, is not that an element of value which would be strongly urged before the arbitrator?—No doubt it would be strongly urged upon the arbitrator, and we could urge something in opposition.

3814. And urge before the arbitrator, with the additional element of its being a compulsory sale?—That also would be urged.

[Adjourned to To-morrow, at Half-past Eleven o'clock.

Thursday, 16*th July* 1868.

MEMBERS PRESENT:

The Chancellor of the Exchequer.	Colonel Lloyd Lindsay.
Colonel John W. Fane.	Mr. Norwood.
Mr. Goschen.	Mr. Potter.
Mr. Graham.	Mr. Sandford.
Mr. Leeman.	Mr. Charles Turner.

THE CHANCELLOR OF THE EXCHEQUER IN THE CHAIR.

On Railway Companies Clauses, Paragraph 6, Section E.

Frank Ives Scudamore, Esq. ; further Examined.

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3815. *Chairman.*] WITH regard to Paragraph E., how is it that this is supposed to carry out that part of the agreement which says, "Caledonian Compensation Clauses where applicable"? According to what we understood last night, the case of the Caledonian Company was this, that they were a Railway Company doing a certain amount of telegraph business over the greater part of their line, but with agreements with Telegraph Companies to work telegraphs over certain sections of their line, and they expected when those agreements fell in they would be able to work telegraphs over the whole of their line, and with that view the Promoters agreed to give them compensation for the reversionary interest in those sections of the line where they did not themselves work telegraphs?—Yes.

3816. With regard to other Railway Companies the Caledonian compensation clauses were to be admitted where applicable; does not this paragraph (*e*) make them of universal application?—It does; I considered it really was of universal application, that if the Caledonian Company had a reversionary interest in a portion of their line, the other Railway Companies might have a reversionary interest on the whole of their line.

3817. What was the meaning of putting in the words "where applicable," if it was of universal application?—Because other parts of the compensation clauses of the Caledonian were not applicable to all the Railway Companies; for instance, the Caledonian had an existing trade; they were to be compensated for that existing trade, but many other Railway Companies, notably the largest Railway Companies, had no existing trade, and therefore required no such compensation. I hardly think that the question of whether a Railway Company has a reversionary right or not depends upon whether that right is to extend over a portion or over the whole of its line.

3818. There is a difference in the position of a Railway Company that does not profess to work telegraphs at all for the public, and one that does, is there not?—At the present time there is a difference, but I do not think that a Railway Company which now does not work telegraphs for the public can be held on that account to be debarred from working telegraphs, at least I think it is a question for the arbitrator whether they are so debarred or not.

Mr. *Coates.*] As in the case of the Great Northern; the telegraphs are worked by the Telegraph Companies, by agreement with the Railway Company; the branches are worked by themselves for their own benefit. There you have a mixed case. In the London and North-Western you have a simple case, where the whole thing is done by bargain

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by the Telegraph Company; in the Lincolnshire and Yorkshire there is a mixed case.

Chairman.] Will you put some gentleman into the box in connexion with Railway Companies to support this clause?

3819. Mr. *Turner* (to Mr. *Scudamore*).] Is it your opinion that the clause which the Chairman has alluded to, does nothing more than what you meant to carry out?—Undoubtedly.

3820. And does not go further than you really intended it to go?—It does not go beyond the understanding I came to with the Railway Companies.

3821. *Chairman.*] That is rather a legal question, is it not, whether the paragraph now under discussion carries out the meaning of the terms agreed on?—I do not think it is quite that; the Railway Companies give me to understand that they had a reversionary right at the end of a certain term in public messages. Without admitting that reversionary right, I admit that that is a claim which should be put before the arbitrator.

3822. Mr. *Goschen.*] Would a Railway Company be able to claim both under (*d*) and (*e*)?—I think certainly not; they cannot come in on each and every of those clauses.

3823. Clause (*d*) compensates them for their not being able, at the expiration of the existing agreements to renew the way, leaves and makes fresh agreements, and he would compensate them in case of not doing so, in respect of loss, by not taking the business into their own hands?—Decidedly. They cannot come in under both.

3824. Have I given a correct description of the effect of the two?—Yes.

3825. Have you any one from the Railway Companies who will support that paragraph?

Mr. *Coates.*] I am authorised to admit that Mr. Scudamore's interpretation is the correct interpretation.

Chairman.] We want some one connected with the Railway Companies to say what they understand by it. Perhaps Mr. Blenkinsop will give us his interpretation.

James Blenkinsop, Esq., called in; and Examined.

J. Blenkinsop, Esq.

3826. *Chairman.*] WHAT do you understand to be the effect of these two paragraphs (*d*) and (*e*) taken together?—I think that (*d*) and (*e*) are rightly interpreted by Mr. Scudamore in his answer which he gave just now.

3827. That no Railway Company can come in under both?—You cannot have compensation under both.

3828. Will you state what you consider to be the interpretation of them in your own words?—Under (*d*), I apprehend that you would claim upon the renewing of the bargain with the Telegraph Company. You would get under that as much as an arbitrator would give you for the renewal of the agreement, and having got that, of course, you could not come afterwards and claim under (*e*).

3829. In what case do you think a company could claim under (*d*), and in what case under (*e*)?—I say (*d*) is clearly applicable to the case of a Railway Company having the power to renew its agreement with a Telegraph Company, and then I apprehend (*e*) was added mainly, and I may say almost solely, on this ground, that the companies considered that they would have a right to say to the arbitrator that they had a reversionary interest in the receipts of the Telegraph Company.

3830. In the assets and goodwill?—In the assets and goodwill, that is to say, they wished to be in this position to contend before the arbitrator, that they had a right to something for goodwill in the business carried on, on their property. That is disputed by the Post Office. You see the words "if any" are added to paragraph (*e*) to keep the question open on both sides "reversionary interest, if any." The Post Office will contend that we have nothing in the shape of reversionary interest at all, that it must be strictly way-leave and compensation for granting the monopoly to the Post Office. That is the Post Office case. On the other hand the Railway Companies wish it to be open to us if the arbitrator thinks

thinks we have a goodwill and a reversionary interest in the telegraph messages, to contend before him that we have such an interest.

3831. What do you consider is the legal power of a Railway Company to work telegraphs?—I do not think that a railway company has any power to expend money in laying down a new plant to carry on public telegraph messages; that is beyond the business of a railway company; but if they have the money expended on plant, that is part of their railway plant, there is no restriction upon them from receiving shillings from the public by using the plant laid down. Therefore I should contend under that they have some interest in the telegraph business. What I say must not be used in prejudice of my company in any arbitration hereafter. I come at your request to express my view; very likely some of the railway companies may entirely differ from my view.

3832. Mr. *Goschen.*] Do I understand rightly that this clause goes beyond the telegraph business of a railway, and points at a revisionary in the telegraph business worked by a telegraph company working on the line?—It leaves it open to the Railway Companies to contend that the Telegraph Companies are in the position of lessees, so to speak, lessees on the property of the Railway Companies, and that at the expiration of the lease we have a reversionary interest; that inasmuch as there is a trade carried on on the property, there is a reversionary interest in the goodwill. The Post Office, by adding the words "if any," leave it open to them to contend that it is not so.

3833. Should I be right in stating that the effect of these clauses is this, that a railway company, on the passing of this Act, would be able to elect between these two Clauses D. and E., and to contend that it was under an agreement, and therefore claimed under D., or that it would have taken the business into its hands, and therefore claimed under E.?—It would be open to a railway company to contend before the arbitrator, under paragraph E., that it had a reversionary interest, but if they put their case in that way under E., they cannot put it under D.; they must elect one way or the other.

3834. *Chairman.*] You think it would be open to any Railway Company, whether now carrying on telegraphic business or not, to claim before the arbitrator a reversionary interest in the assets and goodwill in the telegraphs on the expiration of the agreement?—No doubt about it.

3835. Mr. *Goschen.*] It would be able to elect whether to claim on the ground that it would be entitled to renew its agreement, in which case it would not be able to claim an interest in the goodwill; or it would be able to claim that it might take the business itself into its own hands?—That is the effect of the clauses.

3836. Will you explain the meaning of this, "as well as the amount of the sum payable to the Railway Company in respect of the estimated increase of revenue from public telegraph messages"?—I suppose it means this, that if they are entitled to claim a reversionary interest in the business itself, they are to be allowed to contend for the natural increase of that business, which would take place in the course of a certain number of years—future increase.

3837. *Chairman.*] That looks as if this paragraph allowed them to claim not only for increased way-leaves, but for reversionary interest as well. I do not understand the effects of these words; the first part of the paragraph says, "Such sums as shall be agreed upon, or, in default of agreement, as shall be settled by arbitration as the value of the Railway Company's reversionary interest (if any) in the telegraph receipts from public messages on the expiration of the agreements." Then, it says, "As well as the amount of the sum payable to the Railway Company in respect of the estimated increase of revenue from public telegraph messages on such sections of the line." Does not that point to increased rent for way-leaves?—No; I think it merely points to the increase of the sum for the reversionary interest in the goodwill.

3838. Is not that all included in the reversionary interest?—I think it would be, only it is put in to leave it open to the companies to make a claim for it.

The *Chairman* proposed an amendment to paragraph E., by striking out from the words "Telegraph Companies" to the end of the paragraph.

The paragraph so amended was agreed to by the Committee.

Paragraphs F. and G. were agreed to.

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Paragraph H. was read.

3839. Mr. *Goschen* (to Mr. *Scudamore*).] Is the Committee to understand under this paragraph H. the Postmaster General will pay a yearly rent on the wires, inclusive of those which the Postmaster General has brought and handed over under a previous clause to the Railway Companies?—No; he would only pay for his own wires; he would buy a way-leave for what he used.

3840. But he would have to pay that way-leave on a portion which he has handed over to the Railway Company?—Certainly not.

3841. The wires have become the property under a previous clause of the Railway Company—

Mr. *Coates*.] Only those required for the particular purposes of the Railway Company.

3842. Mr. *Goschen*.] Then to what wires does this apply?—To the wires used for commercial messages.

3843. Not to those used for railway purposes?—No.

3844. This will apply to the posts and wires which the Railway Companies have now, and which are used for public purposes, and not for their own purposes?—To the wires and posts which the Telegraph Companies have now, and which they use for public purposes, or to any other wires and posts which they may hereafter put up for such public purposes; the way-leaves is permission to have the wires and poles on the Railway.

3845. The Government have bought them, but they have bought them subject to a tax which the Railway Company may levy for those posts and wires, they being the property of the railway?—Yes; but that tax being subject to a discount in consideration of the existing agreements which we give up.

3846. So that after having bought the posts and the wires, and having indemnified the railways for the loss of the privilege of making future agreements, you, notwithstanding, are going to pay a perpetual way-leaves for them?—But the perpetual way-leave is subject to all those other considerations which the arbitrator is to take into account.

3847. Mr. *Goschen* (to Mr. *Blenkinsop*).] Could a Railway Company, after being indemnified under paragraph 8, on the ground that it had sold its way-leaves, claim under paragraph H., that the Government should continue to pay it a certain sum per mile?—If the arbitrator had given us everything under one article he would not give it as under another.

3848. You are to have a certain mileage; it is not made dependent upon the indemnity?—It is put that way, for this reason, the way-leave becomes an annual payment, while the other clauses relate to compensation paid down; that is the reason they are separated; it is quite clear that the arbitrator would not give us the value of the way-leave and the compensation under the other clauses, too.

The *Chairman* moved the introduction of the following words at the end of the paragraph, after the word "Company" and in estimating the amount to be paid under any one part of this section shall have regard to the advantages to be obtained and the disadvantages to be sustained by the Railway Company under any part of this section.

Paragraph H. so amended was agreed to.

Paragraphs 7, 8, 9, and 10 were read agreed to.

Clauses 7 D. and 7 E. were struck out.

The Compensation Clause (the clause postponed yesterday) was read, and with amendments was agreed to.

On Clause 7 F., "The Postmaster General may acquire a right of way over the Bridgewater Canal."

3849. Mr. *Goschen* (to Mr. *Scudamore*).] Have you taken into consideration in your estimate the annual expenditure, the rent that would be paid?—Yes; there is next to nothing involved in this, it is simply leaving to them what they now have.

3850. Is it a small sum?—Yes.

3851. So small that the Committee need not trouble themselves about it?—Yes.

3852. The same appplies to the next clause?—Yes, it is really immaterial.

The clause was agreed to.

The remaining clauses were read, and with amendments, agreed to.

The schedules were read and agreed to.

The *Chairman* was directed to report the Bill, with the amendments, to the House.

MINUTES OF PROCEEDINGS

OF THE

SELECT COMMITTEE

ON THE

ELECTRIC TELEGRAPHS BILL;

WITH THE

APPENDIX.

Ordered, by The House of Commons, *to be Printed,*
16 *July* 1868.

435—I.

Thursday, 18*th June* 1868.

Electric Telegraphs Bill read a second time, and committed to a Select Committee.

Tuesday, 23*rd June* 1868.

Committee nominated—

Mr. Chancellor of the Exchequer.	Mr. Leeman.
Mr. Goschen.	Mr. Charles Turner.
Sir Frederick Heygate.	Mr. Norwood.

And Five Members to be added by the Committee of Selection.

Ordered, That the Committee have Power to send for Persons, Papers, and Records.

Ordered, That Five be the Quorum of the Committee.

Ordered, That it be an Instruction to the Select Committee on the Electric Telegraphs Bill to inquire,—

1. Whether it is desirable that the transmission of messages for the public should become a legal monopoly in the Post Office:

2. Whether it should be left to the discretion of the Postmaster General to make special agreements for the transmission of messages or news at reduced rates:

3. What securities should be taken for insuring the secrecy of messages transmitted through the Post Office:

4. What arrangements should be made for the working of submarine cables to foreign countries: and,

5. To hear such Telegraph and Railway Companies and Proprietors as shall by petition, on or before the 26th instant, have prayed to be heard by themselves, their counsel or agents against such of the matters referred to the Committee as affect their particular interests.

Thursday, 25*th June* 1868.

The following Members are added by the Committee of Selection—

Mr. Graham.	Mr. Potter (Carlisle).
Major Cornwall Legh.	Mr. Sandford.
Colonel Loyd Lindsay.	

Wednesday, 1*st July* 1868.

Ordered, That Major Cornwall Legh be discharged from further attendance on the Select Committee, and that Colonel John W. Fane be added thereto.

Thursday, 16*th July* 1868.

Ordered, That the Committee have leave to make a Special Report; and that they have Power to Report the Minutes of Evidence taken before them to The House.

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PROCEEDINGS OF THE COMMITTEE.

Friday, 26th June 1868.

MEMBERS PRESENT:

Mr. Chancellor of the Exchequer.	Mr. Graham.
Mr. Leeman.	Mr. Potter.
Mr. Norwood.	Mr. Turner.
Colonel Loyd Lindsay.	Major Cornwall Legh.
	Mr. Goschen.

Mr. Chancellor of the Exchequer was called to the Chair.

The Committee deliberated.

Resolved, "That the Committee at its next meeting do proceed to consider the preamble of the Bill."

[Adjourned to Wednesday next, at Eleven o'clock.

Wednesday, 1st July 1868.

MEMBERS PRESENT:

Mr. Leeman.	Colonel Loyd Lindsay.
Mr. Norwood.	Mr. Turner.
Mr. Graham.	Mr. Potter.
Mr. Goschen.	Sir Frederick Heygate.

Mr. Chancellor of the Exchequer in the Chair.

Electric Telegraphs Bill.

Counsel:—Mr. *Rodwell*, Mr. *Sargood*, and Mr. *Wheeler*.

Agents:—Mr. *R. H. Wyatt*.

The following Petitions against the Bill were read, and appeared upon:

1. South Eastern Railway Company.
   Counsel:—
   Agents:—Messrs. *Dyson & Co.*
2. Anglo-American Telegraph Company.
   Counsel:—Sir *Mordaunt Wells*.
   Agents:—Messrs. *Bircham*.
3. London and South Western Railway Company.
   Counsel:—Mr. *Hope Scott*.
   Agents:—Messrs. *Bircham*.
4. Atlantic Telegraph Company.
   Counsel:—Sir *Mordaunt Wells*.
   Agents:—Messrs. *Sherwood & Co.*

5. Universal Private Telegraph Company.
Counsel:—Mr. *Merewether.*
Agents:—Messrs. *Kempson & Co.*

6. London, Chatham, and Dover Railway Company.
Counsel:—
Agent:—Mr. *Cleather.*

7. Bristol and Exeter Railway Company.
Counsel:—
Agents:—Messrs. *Dyson & Co.*

8. Highland Railway.
Counsel:—
Agents:—Messrs. *Martin & Leslie.*

9. Lancashire and Yorkshire Railway Company.
Counsel:—Mr. *Hope Scott,* Mr. *Merewether,* and Mr. *Vernon Harcourt.*
Agents:—Messrs. *Dyson & Co.*

10. London and North Western Railway Company, Midland Railway Company, Great Western, and Great Northern Railway Companies.
Counsel:—Mr. *Hope Scott,* Mr. *Merewether,* Mr. *Denison,* Mr. *Venables,* and Mr. *Davison.*
Agents:—Messrs. *Blenkinsop.*

11. Submarine Telegraph Company.
Counsel:—Mr. Serjeant *Tindal Atkinson.*
Agents:—Messrs. *Dorington & Co.*

12. Submarine Telegraph Company.
Counsel:—Mr. Serjeant *Tindal Atkinson.*
Agents:—Messrs. *Dorington & Co.*

13. North Eastern Railway Company.
Counsel:—Mr. *Hope Scott* and Mr. *Denison.*
Agents:—Messrs. *Richardson, Gutch & Co.*

14. Electric Telegraph Company, United Kingdom Electric Telegraph Company, and British and Irish Magnetic Telegraph Company.
Counsel:—Mr. *Hope Scott,* Mr. *Denison,* Mr. *Haley,* and Mr. *Bidder.*
Agents:—Messrs. *Dyson & Co.*

15. London and Provincial Telegraph Company.
Counsel:—
Agent:—Mr. *R. H. Wyatt.*

16. North British Railway Company.
Counsel:—Mr. *Clerk.*
Agents:—Messrs. *Sherwood & Co.*

17. Solicitors of the Electric and International Telegraph Company.
Counsel:—
Agents:—Messrs. *Wilson & Co.*

18. Reuter's Telegram Company.
Counsel:—Mr. *Vernon Harcourt.*
Agents:—Messrs. *Dyson & Co.*

19. Earl of Ellesmere and late Duke of Bridgewater's Trustees (on Clauses).
Counsel:—
Agent:—Mr. *Thomas Part.*

20. R. Brocklebank and others.
Counsel:—
Agents:—Messrs. *Blenkinsop.*

21. E. B. Bright and others.
Counsel:—
Agents:—Messrs. *Dyson & Co.*

22. T. Hannington and others.
Counsel:—
Agents:—Messrs. *Dyson & Co.*

Mr. *Rodwell* was heard to open the case in support of the Preamble of the Bill.

Mr. *Hope Scott* was heard to make an application to the Committee that the Promoters of the Bill should be directed to produce their agreements with the Electric Telegraph and Railway Companies.

Sir *Mordaunt Wells* and Mr. *Merewether* were heard in support of the application.

Mr. *Rodwell* was heard against the application.

Room cleared.—The Committee deliberated.

Motion made, and Question proposed, "That the Committee are of opinion that before the Petitioners can call upon the Promoters to produce their agreements with the Telegraph Companies, the petitioners must lay a foundation for doing so by producing the agreements existing between them and those Telegraph Companies with whom arrangements have been made"—(The *Chairman*).—Question put, and *agreed to.*

Motion made, and Question proposed, "That, should the terms of the agreements between the Petitioners and the Telegraph Companies show that the Petitioners may be prejudiced by arrangements made by the Promoters, then the Petitioners shall be entitled to call for those parts of the agreements between the Promoters and the Telegraph Companies which affect the existing relations between the Telegraph Companies and the Petitioners"—(The *Chairman*).—Question put.—The Committee divided:

Ayes, 6.	Noe, 1.
Mr. Norwood.	Mr. Leeman.
Colonel Loyd Lindsay.	
Mr. Graham.	
Mr. Potter.	
Mr. Turner.	
Mr. Goschen.	

Parties called in and informed of the Resolution of the Committee.

In support of the preamble, Mr. *Frank Ives Scudamore* examined.

[Adjourned to To-morrow, at half-past Eleven o'clock.

Thursday, 2nd July 1868.

MEMBERS PRESENT:

Mr. Leeman.	Mr. Turner.
Colonel Fane.	Mr. Potter.
Mr. Norwood.	Mr. Graham.
Colonel Loyd Lindsay.	Mr. Goschen.
Mr. Sandford.	Sir Frederick Heygate.

MR. CHANCELLOR OF THE EXCHEQUER in the Chair.

In support of the preamble, Mr. *Frank Ives Scudamore* further examined.

Mr. *George Harrison* and Mr. *John Patterson* were severally examined.

[Adjourned to Monday next, at half-past Eleven o'clock.

Monday, 6th July 1868.

MEMBERS PRESENT:

Mr. Leeman.	Sir F. Heygate.
Mr. Graham.	Mr. Goschen.
Mr. Potter.	Mr. Norwood.
Mr. Turner.	Mr. Sandford.

In the absence of the *Chancellor of the Exchequer*, Mr. *Goschen* was called to the Chair.

Mr. *Chancellor of the Exchequer* afterwards took the Chair.

Mr. *Hope Scott* put in a paper containing the heads of arrangement between the Post Office and the Railway Companies, and was heard to apply for an adjournment of the consideration of the railway portion of the case until Thursday next.

Sir *Mordaunt Wells* and Mr. Serjeant *Tindal Atkinson* were heard to make a similar application. The Committee agreed to the request.

Mr. *Frank Ives Scudamore* recalled, and further examined.

Mr. *John Fox Turner*, Professor *William Stanley Jevons*, Mr. *Richard Spelman Culley*, C.E., Sir *Charles Wheatstone*, Mr. *Thomas Kettle*, and Mr. *Latimer Clark*, were severally examined.

[Adjourned to To-morrow, at Eleven o'clock.

Tuesday, 7th July 1868.

MEMBERS PRESENT:

Mr. Goschen.	Mr. Leeman.
Mr. Graham.	Mr. Norwood.
Sir Frederick Heygate.	Mr. Potter.
Colonel Fane.	Mr. Charles Turner.

MR. CHANCELLOR OF THE EXCHEQUER in the Chair.

Mr. *John Edward Taylor*, Mr. *William Saunders*, Dr. *Cameron*, Mr. *Francis D. Finlay*, Mr. *John Merrick*, and Mr. *Thomas Allan* were severally examined.

[Adjourned to Thursday next, at half-past Eleven o'clock.

Thursday, 9th July 1868.

MEMBERS PRESENT:

Mr. Leeman.	Mr. Goschen.
Colonel Fane.	Mr. Charles Turner.
Mr. Norwood.	Mr. Potter.
Mr. Graham.	Sir Frederick Heygate.

MR. CHANCELLOR OF THE EXCHEQUER in the Chair.

Mr. *Merewether*, on behalf of the London and North Western, the Midland, the Great Northern, the Great Eastern, the Lancashire and Yorkshire, the Glasgow and South Western, and the Great North of Scotland Railway Companies, was heard to state that an agreement had been come to between them and the Promoters of the Bill, and that the latter having agreed to insert clauses in the Bill for the carrying out of such agreement, the opposition of the Companies would be withdrawn. A separate agreement having been come to with the Great Western Railway Composition, their opposition would also be withdrawn.

Mr. *Denison* was heard to make a similar statement on behalf of the North Eastern Railway Company.

Mr.

Mr. *Vernon Harcourt*, on behalf of Reuter's Telegram Company, was heard to state that no arrangement had been come to with the Promoters of the Bill.

Sir *Mordaunt Wells* informed the Committee that an arrangement had been come to with the Anglo-American Telegraph Company, and with the Atlantic Telegraph Company, and that therefore their opposition would be withdrawn.

Mr. *Parkes*, on behalf of the South Eastern Railway Company, was heard to state that an agreement had been come to with the promoters of the Bill, but as their case was a special one, he applied that the agreement should be scheduled to the Bill.

Mr. *Rodwell* was heard to state that there was no objection to this course being adopted.

Mr. *Parkes*, on behalf of the Bristol and Exeter Railway Company, was heard to state that an agreement had been come to with the promoters, but that a special clause would be required to carry it out.

Mr. *Martin* was heard to state that the Highland Railway Company having come to terms, withdrew their opposition to the Bill.

Mr. *Clerk* was heard to apply on behalf of the North British Railway Company that their agreement with the promoters should be scheduled to the Bill.

Mr. *Vernon Harcourt* was heard to make an application that the promoters should be directed to produce any agreements or any heads of agreement which existed between them and the Submarine Companies.

Mr. *Rodwell* objected to produce anything but the signed agreements.

The Chairman stated that Mr. Vernon Harcourt might cross-examine Mr. Scudamore as to any heads of arrangements which were in existence.

Mr. *Frank Ives Scudamore* recalled, and further examined.

[Adjourned to To-morrow, at half-past Eleven o'clock.

Friday, 10*th July* 1868.

MEMBERS PRESENT:

Mr. Leeman.	Mr. Turner.
Sir Frederick Heygate.	Mr. Sandford.
Mr. Norwood.	Mr. Potter.
Mr. Grahame.	Colonel Fane.
Mr. Goschen.	

MR. CHANCELLOR OF THE EXCHEQUER in the Chair.

Mr. *Vernon Harcourt* was heard to state that an agreement having been come to between Reuter's Telegram Company and the promoters of the Bill, he withdrew his opposition.

Mr. *Frank Ives Scudamore* recalled, and further examined.

On the following question, viz.:—"Do you not know, upon the agreement now before the Committee, which was put in as having been entered into with the Electric Telegraph Company, the purchase money will amount to 3,200,000 *l.*," being asked by Mr. *Leeman*—

Mr. Chancellor of the Exchequer objected to the question.

Room cleared.—The Committee deliberated.

Motion made, and Question put, "That this question be now put"—(Mr. *Leeman*).—The Committee divided:

Ayes, 3.	Noes, 6.
Mr. Leeman.	Mr. Norwood.
Mr. Goschen.	Mr. Graham.
Mr. Sandford.	Mr. Potter.
	Mr. Turner.
	Sir Frederick Heygate.
	Colonel Fane.

Parties called in.

Mr. *Frank Ives Scudamore*, further examined.

Mr. *Merewether* was heard to state that the Universal Private Telegraph Company had come to terms with the Promoters of the Bill.

Mr. *Rodwell* was heard to inform the Committee that he had no further witnesses to call in support of the Preamble of the Bill.

Room cleared.—The Committee deliberated.

Parties called in, and informed that the Committee consider, with regard to the Preamble, that it should now be treated as a public matter resting with the Members of the Committee, and not as a private matter between promoters and opponents.

Mr. *Edward B. Bright* and Mr. *Henry Weaver* were severally examined.

[Adjourned to Monday next, at half-past Eleven o'clock.

Monday, 13*th July* 1868.

MEMBERS PRESENT:

Mr. Leeman.	Mr. Goschen.
Sir Frederick Heygate.	Mr. Turner.
Mr. Norwood.	Mr. Potter.
Mr. Graham.	Colonel Fane.

Mr. Chancellor of the Exchequer in the Chair.

Mr. *Burt* and Mr. Serjeant *Tindal Atkinson* were heard to state that they withdrew their opposition on the part of the South Western Railway Company and the Submarine Company respectively.

Mr. *Rodwell* was heard to state that arrangements had been made with all the opponents to the Bill.

Mr. *M. H. Foster*, examined.

Mr. *Frank Ives Scudamore*, further examined.

Room cleared.—The Committee deliberated.

Preamble read a second time.

Amendment proposed in line 1, to leave out all the words after the word "Whereas," to the word "Communication," in line 4, in order to insert the words "Many important districts within the United Kingdom of Great Britain and Ireland are without the means of communication by electric telegraphs"—(Mr. *Goschen*)—instead thereof.—Question put, "That the words proposed to be left out stand part of the Preamble."—The Committee divided:

Ayes, 5.	Noes, 3.
Mr. Norwood.	Mr. Leeman.
Mr. Potter.	Mr. Graham.
Mr. Turner.	Mr. Goschen.
Sir Frederick Heygate.	
Colonel Fane.	

Amendment proposed, after the word "Communication" in line 4, to leave out all the words to the word "place" in line 10.—Question, "That the words proposed to be left out stand part of the Preamble,"—put, and *negatived.*

Question put, "That the Preamble as amended is proved."—The Committee divided:

Ayes, 7.	Noe, 1.
Mr. Norwood.	Mr. Leeman.
Mr. Graham.	
Mr. Potter.	
Mr. Turner.	
Mr. Goschen.	
Sir Frederick Heygate.	
Colonel Fane.	

Motion made, and Question put, "That the imperfect information before the Committee on the subject of the ultimate cost involved in the purchase of the telegraph companies and other interests, as well as the uncertain amount of revenue to be derived from the working of telegraphs by the Post Office, does not justify the further prosecution of the Bill,

Bill, until that information shall have been laid before Parliament"—(Mr. *Leeman*)—
—The Committee divided:

Aye, 1.	Noes, 7.
Mr. Leeman.	Mr. Norwood. Mr. Graham. Mr. Potter. Mr. Turner. Mr. Goschen. Sir Frederick Heygate. Colonel Fane.

Parties called in, and informed thereof.

Clauses 1, 2, and 3, *agreed to.*

[Adjourned to To-morrow, at Twelve o'clock.

Tuesday, 14*th July* 1868.

MEMBERS PRESENT:

Mr. Goschen.	Mr. Norwood.
Mr. Graham.	Mr. Potter.
Sir Frederick Heygate.	Mr. Sandford.
Mr. Leeman.	Mr. Charles Turner.

Mr. CHANCELLOR OF THE EXCHEQUER in the Chair.

The Committee deliberated.

Resolved, That the Chairman do move the House for power to make a Special Report.

DRAFT REPORT proposed by the Chairman, read as follows:

"Your Committee have considered the several matters which they were specially instructed to inquire into, and are of opinion—

"1st. That it is not desirable that the transmission of messages for the public should become a legal monopoly in the Post Office.

"2nd. That it should be left to the discretion of the Postmaster General, with the consent of the Treasury, to make special agreements for the transmission of messages or news at reduced rates within certain limits, but that any such special agreements should be laid upon the Table of the House of Commons as soon as conveniently may be.

"3rd. That security should be taken for ensuring the secrecy of messages transmitted through the Post Office by making the violation of such secrecy punishable as a misdemeanour.

"4th. That it is desirable that provision should be made for the working of those submarine cables which the Postmaster General may acquire, by leasing the same to a company or companies; but that circumstances may arise which may make it expedient that the Post Office should itself provide for the working of such cables."

Motion made, and Question, "That the Draft Report proposed by the Chairman be now read a second time, paragraph by paragraph,"—put, and *agreed to.*

(1.) Read—That it is not desirable that the transmission of messages for the public should become a legal monopoly in the Post Office.

Amendment proposed, to leave out from the word "That" to the end of the paragraph, in order to insert the words "1. in view of the high terms offered by the Government, not only for the plant and other assets of the existing Telegraph Companies, but for their good-will, and for the extinction of all existing rights of railway and other companies, with regard to the transmission of telegraphic messages for the public; and, secondly, in view of the proviso with respect to unformity of rates to be charged by the Post Office under the Bill, it will be necessary in the event of the present Bill being passed, to vest the legal monopoly of transmitting messages for the public in the Post Office, in order to protect the revenue of the Post Office, weighted as it will be with a heavy annual charge on the capital to be expended on the purchase of existing rights,

against such competition as might arise by the selection of the most remunerative districts only for the operations of private enterprise. If the rates could be at once reduced to so low a point that competition would be impossible, it might be unnecessary to create a legal monopoly ; but the rate of 1 *s.* for telegrams between great towns, seems to your Committee to offer sufficient margin for future competition to the great risk of the Exchequer "—(Mr. *Goschen*)—instead thereof.—Question put, " That the words proposed to be left out stand part of the question."—The Committee divided :

Ayes, 6.	Noe, 1.
Mr. Leeman.	Mr. Goschen.
Mr. Norwood.	
Mr. Graham.	
Mr. Potter.	
Mr. Turner.	
Sir Frederick Heygate.	

Paragraph *agreed to.*

Paragraph 2, amended, and *agreed to.*

Paragraph 3, *agreed to.*

Paragraph 4.—Amendment proposed in line 1, after the word " that," to leave out the words " it is," in order to insert the words " the special circumstances at present attending the working of these submarine cables which the Postmaster General may acquire make it"—(Mr. *Norwood*)—instead thereof.—Question put, " That the words proposed to be left out stand part of the paragraph."—The Committee divided :

Aye, 1.	Noes, 6.
Mr. Turner.	Mr. Leeman.
	Mr. Norwood.
	Mr. Graham.
	Mr. Potter.
	Mr. Goschen.
	Sir Frederick Heygate.

Another amendment proposed in line 1, after the word " of," to leave out all the words to the word " by," in line 2, in order to insert the word " them "—(Mr. *Norwood*)—instead thereof.—Question, " That the words proposed to be left out, stand part of the paragraph "—put, and *negatived.*

Question, " That the word ' them ' be there inserted "—put and *agreed to.*

Another Amendment proposed in line 3, after the word " same," to insert the words " in the first instance "—(Mr. *Norwood*).—Question, " That those words be there inserted " —put and *agreed to.*

Another Amendment proposed in line 3, after the word " companies " to insert the words " copies of any such lease to be laid before Parliament "—(Mr. *Norwood*).—Question, " That those words be there inserted "—put, and *agreed to.*

Another Amendment proposed in line 3, to leave out all the words after the word " but " to the word " it " in line 4, in order to insert the words " it may ultimately be found "—(Mr. *Norwood*)—instead thereof.—Question, " That the words proposed to be left out stand part of the paragraph "—put, and *negatived.*

Question, " That those words be there inserted "—put, and *agreed to.*

Another Amendment proposed to leave out after the word " itself," in line 4, all the words to the word " such," in order to insert the word " work "—(Mr. *Norwood*)—instead thereof.—Question, " That the words proposed to be left out stand part of the paragraph "—put, and *negatived.*

Question, " That the word ' work ' be then inserted "—put, and *agreed to.*

Question, " That this Report be the Special Report of the Committee to the House "—put, and *agreed to.*

Parties called in.

Clause 4 amended, and *agreed to.*

Clauses 5 and 6 *agreed to.*

Clause 7 *postponed.*

Clause 8 *agreed to.*

Clause 9 amended, and *agreed to.*

Amendment proposed in line 31. After the word " exceeding " to insert the word " sixpence."—Question, " That the word ' sixpence ' be inserted."—(Mr. *Potter*)—put, and *negatived.*

Question

Another Amendment proposed, "That the word 'shilling' be then inserted"—put, and *agreed to.*

Another Amendment proposed in line 33, after the word "exceeding," to insert the word "threepence."—(Mr. *Norwood*).—Question put, "That the word 'threepence' be there inserted."—The Committee divided:

Ayes, 5.	Noes, 3.
Mr. Norwood.	Mr. Leeman.
Mr. Graham.	Mr. Turner.
Mr. Potter.	Mr. Sandford.
Mr. Goschen.	
Sir Frederick Heygate.	

Another Amendment proposed. After the word "additional" in line 34, to insert the word "five."—(Mr. *Norwood*).—Question, "That the word 'five" be there inserted"—put, and *agreed to.*

Another Amendment proposed, in line 34, after the words "part of," to insert the word "five."—(Mr. *Norwood*).—Question, "That the word 'five' be there inserted"—put, and *agreed to.*

Clause as amended *agreed to.*

Clauses 10 and 11 *agreed to.*

Clause 12 amended, and *agreed to.*

Postponed Clause 7 *disagreed to.*

New Clause 5*a* (Providing for purchase of certain undertakings) brought up on behalf of the Telegraph Companies.

Amendment proposed in line 3 of paragraph 2, to leave out the word "twenty," in order to insert the word "17"—(Mr. *Sandford*)—instead thereof.

Mr. *Denison* was heard against the proposed Amendment, and stated that the Companies had retired upon the agreement being come to, and to submit that the Committee could not alter the terms of the agreement, but could only either negative them or accept them.

Room cleared. The Committee deliberated. Question put, "That the word 'twenty' stand part of the Clause."—The Committee divided:

Ayes, 5.	Noes, 3.
Mr. Norwood.	Mr. Leeman.
Mr. Graham.	Mr. Goschen.
Mr. Potter.	Mr. Sandford.
Mr. Turner.	
Sir Frederick Heygate.	

Motion made, and Question put, "That the Committee do now adjourn"—(Mr. *Goschen*).—The Committee divided:

Ayes, 2.	Noes, 5.
Mr. Leeman.	Mr. Norwood.
Mr. Goschen.	Mr. Graham.
	Mr. Potter.
	Mr. Turner.
	Sir Frederick Haygate.

[Adjourned to To-morrow, at Half-past Eleven o'clock.

Wednesday, 15*th July* 1868.

MEMBERS PRESENT:

Mr. Leeman.	Mr. Turner.
Mr. Norwood.	Mr. Goschen.
Mr. Graham.	Mr. Sandford.
Mr. Potter.	

Mr. CHANCELLOR OF THE EXCHEQUER in the Chair.

Mr. *Frank Ives Scudamore* further examined.

New Clause, *5a*, further considered.

Amendment proposed, after the words "net profits," to insert the words, "taken on an average of the last three years"—Mr. *Goschen*).—Question, "That those words be there inserted"—put, and *negatived.*

Another Amendment, in paragraph 2, in line 5, to leave out the words, "30th June 1868," in order to insert the words, "31st of December 1867"—(Mr. *Goschen*)—instead thereof.—Question put, "That the words proposed to be left out stand part of the paragraph."—The Committee divided:

Ayes, 4.	Noes, 2.
Mr. Leeman.	Mr. Potter.
Mr. Norwood.	Mr. Goschen.
Mr. Graham.	
Mr. Turner.	

Another Amendment proposed in the same paragraph, line 7, after the words "so conveyed," to insert the words "provided that the sum to be taken as the net profits, shall in no case exceed the amount of income, upon which income tax shall have been last declared by the said Company before the 1st of June 1868"—(Mr. *Goschen*).—Amendment by leave, *withdrawn.*

Amendments made.

Question, "That new Clause *5a* as amended, be added to the Bill," put, and *agreed to.*

New Clause *7c*, brought up on behalf of the Railway Companies, read first and second time.

Mr. Davison was heard on behalf of the North British Railway Company.

Mr. *Mason*, and Mr. *Johnson*, severally examined.

Amendment proposed, in paragraph 4, line 7, to leave out the word "and"—(Mr. *Goschen*).—Question put, "That the word 'and' stand part of the Clause."—The Committee divided:

Ayes, 3.	Noes, 3.
Mr. Leeman.	Mr. Norwood.
Mr. Graham.	Mr. Potter.
Mr. Turner.	Mr. Goschen.

Whereupon, the Chairman declared himself with the Ayes.

Paragraph 6*b*, Amendment proposed to leave out the paragraph—(Mr. *Goschen.*)

Question put, "That the paragraph stand part of the Clause."—The Committee divided:

Ayes, 4.	Noe, 1.
Mr. Leeman.	Mr. Goschen.
Mr. Graham.	
Mr. Potter.	
Mr. Turner.	

Amendments made.

[Adjourned to To-morrow, at Half-past Eleven o'clock.

Thursday, 16*th July* 1868.

MEMBERS PRESENT:

Mr. Leeman.	Mr. Potter.
Mr. Norwood.	Mr. Turner.
Colonel Lloyd Lindsay.	Mr. Goschen.
Mr. Graham.	Colonel Fane.

Mr. CHANCELLOR OF THE EXCHEQUER in the Chair.

Paragraph 6*e*, *amended.*

Room cleared. The Committee deliberated.

Question put "That this paragraph, as amended, stand part of the Clause."—The Committee divided:

Ayes, 6.	Noe, 1.
Mr. Leeman.	Mr. Goschen.
Colonel Lloyd Lindsay.	
Mr. Graham.	
Mr. Potter.	
Mr. Turner.	
Colonel Fane.	

Clause, as amended, *agreed to*, and added to the Bill.

New Clause (providing for compensation to the servants of Telegraph Companies)—brought up, read first and second time.—Amendment proposed, to leave out the words "75 *l.*," in order to insert the words "50 *l.*"—(Mr. *Leeman*)—instead thereof.

Room cleared. The Committee deliberated.

Question put, "That the words "75 *l.*" stand part of the Clause."—The Committee divided:

Ayes, 4.	Noes, 4.
Colonel Lloyd Lindsay.	Mr. Leeman.
Mr. Potter.	Mr. Norwood.
Mr. Goschen.	Mr. Graham.
Colonel Fane.	Mr. Potter.

Whereupon, the Chairman declared himself with the Ayes.

Clause, as amended, added to the Bill.

New Clause (Postmaster General may acquire a right of way over the Bridgwater Canal), read first and second time, and *added to the Bill.*

New Clause (Postmaster General may acquire a right of way over the Grand Junction Canal), read first and second time, and *added to the Bill.*

New Clause (Agreements confirmed), read first and second time, and *added to the Bill.*

New Clause (power for Postmaster General to enter into special agreements with proprietors of newspapers), read first and second time, and *added to the Bill.*

New Clause (messages having priority to be specially marked), read first and second time, and *added to the Bill.*

New Clause (punishment for disclosing or intercepting messages), read first and second time, amended, and *added to the Bill.*

New Clause (property in telegraphic messages to be laid in the Postmaster General), read first and second time, and *added to the Bill.*

New Clause (Postmaster General to pay rates, &c.), read first and second time.—Amendment proposed in line 4, to leave out all the words after the word "charges" to the end of the Clause, in order to insert the words "in the same manner and to the same extent as if such lands, property, and undertakings had remained in the hands of the Companies or persons from whom the same had been so purchased or acquired"—(Mr. *Leeman*)—instead thereof.

Room cleared. The Committee deliberated.

Question put, "That the words proposed to be left out, stand part of the Clause."—The Committee divided:

Ayes, 5.	Noes, 3.
Mr. Norwood.	Mr. Leeman.
Colonel Lloyd Lindsay.	Mr. Graham.
Mr. Turner.	Mr. Potter.
Mr. Goschen.	
Colonel Fane.	

Clause agreed to, and *added to the Bill.*

New Clause (as to appointment of umpire in default of his appointment by arbitrator), read first and second time, amended, and *added to the Bill.*

New Clause brought up, amended, and *added to the Bill.*

New Clause (Act not to take effect until requisite funds have been provided by Parliament), read first and second time, amended, and *added to the Bill.*

Schedule considered, amended, and *agreed to.*

Ordered, to Report, together with the Minutes of Evidence and Appendix.

To Report.

APPENDIX.

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APPENDIX.

Appendix, No. 1.

PAPERS handed in by Mr. *Scudamore*, 6 July 1868. App. No. 1.

(A.)

COPY of a LETTER addressed by Mr. *Scudamore*, Assistant Secretary of the Post Office, to several Directors General of Posts and Telegraphs in Continental States.

General Post Office, London,
Sir, 23 April 1868.

HER MAJESTY'S Government is at this moment engaged in carrying a measure through Parliament, the object of which is to enable the Postmaster General to acquire the property of the several trading companies in the United Kingdom owning lines of electric telegraph for the transmission of public messages, to the end that the management of the telegraph may be vested in the Post Office, the wires extended to places at present without telegraphic accommodation, and a reduced and uniform rate of charge adopted.

The opponents of the measure allege, as will be seen on reference to page 62 of the accompanying pamphlet, that the class who use the electric telegraph most freely are, "stockbrokers, mining agents, shipbrokers, colonial brokers, racing and betting men, fishmongers, fruit merchants, and others engaged in business of a speculative character, or who deal in articles of a perishable nature." In the early days of telegraphy, when the rates of charge for the transmission of telegrams were high, and when the use of the telegraph was imperfectly understood, the Postmaster General has no doubt that its employment was for the most part restricted to the classes indicated; but he has every reason to believe, and he feels sure that the experience of the Continental telegraphic administrations will confirm his belief, that reductions in the rate of charge have invariably brought a new class of business to swell the telegraphic revenue; that lower rates have enabled small traders, shopkeepers, and so forth, to employ the telegraph in the transaction of their business, in cases where a high tariff would have precluded its use, and that each reduction has directly tended, not only to a more extended use of the telegraph amongst the trading classes generally, but also to popularise the telegraph amongst the general public, and to induce a free resort to it under circumstances quite apart from commercial pursuits.

The Postmaster General is consequently desirous of ascertaining to what extent the experience of the * telegraphic administration bears out this impression, and as his Grace is somewhat at a loss to determine the best mode of obtaining this information, he has decided upon asking your good offices in this matter, believing that he may confidently rely upon your doing him the favour of causing the requisite information to be collected and transmitted to him as speedily as possible.

At the same time I am to state that his Grace would be very glad to receive a map showing the telegraphic stations in † distinguishing, if possible, those which are at railway stations from those which are in the precincts of the towns which they serve.

I have, &c.
(signed) *Frank Ives Scudamore.*

REPLY received from the Director General of the Telegraphs in France.

Sir, Paris, le 18 Mai 1868.

M. le Directeur Général des Postes Françaises m'a transmis, comme rentrant dans mes attributions, la lettre que vous avez bien voulu lui adresser à la date du 23 Avril dernier, à l'effet d'obtenir quelques renseignements sur l'usage que le public fait en France des communications telegraphiques.

Ainsi

* French, Prussian, Austrian, &c.
† France, Prussia, Austria, &c., as the case required.

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Ainsi que vous l'avez très exactement pensé, le télégraphe n'est pas aujourd'hui l'apanage exclusif de quelques classes de speculateurs; son emploi s'est vulgarisé par un effet naturel d'une part de l'abaissement successif des tarifs qui a mis ce mode de correspondance à la disposition de toutes les fortunes, de l'autre, du developpement progressif du reseau qui, après avoir relié d'abord tous les chefs lieux de departement, puis tous les chefs lieux d'arrondissement, étend actuellement ses ramifications jusque dans les campagnes.

Le nombre toujours croissant des bureaux cantonaux dont les petites localités sont dotées chaque année, sur la demande et avec le concours des communes, est une preuve que la telegraphie ne repond pas uniquement à des besoins de speculation, lesquels ne se produisent guère que dans les grand centres, mais s'addresse en réalité à toutes les branches du commerce et de l'industrie, à tous les interêts de famille.

L'exactitude de cette assertion est établie, d'ailleurs, d'une mainière précise par les resultats statistiques suivants, qui indiquent pour l'année 1867 dans quelle proportion les dépêches se partagent suivant la nature des correspondances:

Statistique des dépêches suivant leur objet.

	Proportion pour cent.	
	Télégraphie intérieure.	Télégraphie international.
Gouvernement, administration, service, dépêches officielles et diplomatiques -	6·81	1·50
Famille, intérêts privés - - - -	41·14	21·86
Publicité, journaux - - - -	0·70	2·27
Commerce des céreales - - - -	5·04	6·93
Commerce général, industrie - - -	27·67	42·52
Affaires de bourse - - - -	3·61	15·68
Affaires diverses - - - - -	15·02	8·52
Dépêches secrètes - - - - -	0·01	0·72
	100·00	100·00

Bien que, sur quelques points, les chiffres diffèrent d'une façon sensible pour la correspondance intérieure ou internationale, il en résulte, néanmoins, dans les deux cas, que les intérêts de famille et les transactions du commerce absorbent ensemble bien près des $\frac{3}{4}$ du nombre total des dépêches, tandis que les affaires de spéculation ne tiennent qu'une place beaucoup plus restreinte,—moins de $\frac{1}{25}$ à l'intérieur et de $\frac{1}{6}$ avec l'étranger.

J'appellerai en outre votre attention, Monsieur le Directeur Général, sur un dernier résultat de cette statistique, le nombre presqu' insignifiant des dépêches secrètes.

La brochure *case of the télégraph* (page 31) a reproché au Gouvernement Français d'exercer sur toutes les dépêches et notamment sur les correspondances de la Bourse de Paris, un côntrole abusif, qui était la source de plaintes nombreuses.

L'Administration Française ne saurait trop protester contre une semblable accusation, qui ne repose sur aucun fondement.

Le seul contrôle que le Gouvernement exerce sur la correspondance télégraphique est celui que lui prescrivent la législation intérieure et les conventions internationales, c'est-à-dire qu'il est exclusivement limité aux dépêches dont le contenu serait de nature à porter atteinte à la sécurité de l'état ou aux lois du pays, et jamais l'exercice de ce droit n'a donné lieu à aucune réclamation sérieuse.

Loin de chercher, d'ailleurs, à étendre son ingérence dans les correspondances privées, le Gouvernement Français a provoqué dans la correspondance internationale, et introduit dans la correspondance intérieure, l'admission des dépêches secrètes, qui donnent au public un moyen de s'affranchir de toute surveillance.

La public a, sans doute, usé de cette nouvelle faculté, mais avec une modération qui vous paraîtra, Monsieur le Directeur Général, un témoignage irrécusable de sa confiance dans le service télégraphique Français.

Je ne terminerai pas, Monsieur le Directeur, sans me féliciter de l'occasion qui me met en relation avec vous, et je me ferai un plaisir de vous donner tous les renseignements dont vous pourriez avoir besoin sur la télégraphie en France.

Agréez, Monsieur le Directeur Général, l'assurance de ma haute considération.

Le Directeur Général.

Pour le Directeur Général, et par son ordre,
l'Inspecteur Général.

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TRANSLATION of REPLY received from the Prussian Telegraphic Administration.

GENERAL DIRECTION of the TELEGRAPHS of the NORTH GERMAN CONFEDERATION.

Berlin, 1 May 1868.

THE undersigned General Direction has the honour to state, in reply to the letters from the British Post Office of the 23rd April, that statistical returns respecting the number of despatches forwarded by small shopkeepers and private persons, as compared with the number sent by bankers, stockbrokers, and speculators, have not been kept for many years past. It may, however, be stated with confidence, that whilst in the early days of the telegraph its use was almost exclusively confined to bankers, stockbrokers, large commercial houses, and newspaper correspondents, each reduction of rate or extension of the system to small towns has considerably increased the number of those who regularly send and receive messages.

This statement is borne out by a comparison of the increase of the despatches within the first zone (*i.e.*, within a circle having a radius of 10 German miles), with the increase in the number sent to stations of the second and third zones.

For, as the larger places of business and the manufacturing towns in Prussia lie from 40 to 80 German miles apart, the despatches of the stockbrokers, speculators, and principal merchants belong principally to the second and third zones, whilst those of the first zone relate mainly to family affairs and small matters.

The diagram herewith transmitted shows the increase in the correspondence which resulted from the reduction of the charges, as well as the proportion of the number of the inland despatches of the first, second, and third zones.

The map of the telegraphic system and stations of the North German Confederation is at present being printed, but it will probably be ready in the course of a week.

The undersigned General Direction will then do itself the honour to forward a copy of this map to the British Post Office.

The lines and stations printed in green colour in this map indicate the various railway offices, which are also authorised to transmit messages which do not relate to the service of the railway. These stations are for the most part found at railway stations. All other stations are Government telegraph stations, which, as a rule, are found in the middle of towns, and only in a few instances are at railway stations, when the latter are also in the middle of the town. The distance of the various railway telegraph stations from the centre of the town is, however, not shown in the map, and the undersigned General Direction regrets that it is not in its power to communicate any further details.

(signed) *V. Thoused.*

COPY of a LETTER addressed by Mr. *Scudamore*, Assistant Secretary to the Post Office, to the Directors General of Posts and Telegraphs at Berne and Brussels respectively.

General Post Office, London,
23 April 1868.

Sir,

WITH reference to my letter of the 18th instant, transmitting a pamphlet embodying the objections of the Electric and International Telegraph Company to the proposal of Her Majesty's Government, to incorporate the management of the electric telegraph in this country with that of the Post Office, I am directed to state that, on reference to page 62 of that pamphlet, it will be seen that it is alleged that the class who use the electric telegraph most freely are stockbrokers, mining agents, shipbrokers, colonial brokers, racing and betting-men, fishmongers, fruit merchants, and others engaged in business of a speculative character, or who deal in articles of a perishable nature.

In the early days of telegraphy, when the rates of charge for the transmission of telegrams were high, and when the use of the telegraph was imperfectly understood, the Postmaster General has no doubt that its employment was for the most part restricted to the classes indicated; but he has every reason to believe, and he feels sure that the experience of the Continental telegraphic administrations will confirm his belief, that reductions in the rate of charge have invariably brought a new class of business to swell the telegraphic revenue; that lower rates have enabled small traders, shopkeepers, and so forth, to employ the telegraph in the transaction of their business in cases where a high tariff would have precluded its use, and that each reduction has directly tended not only to a more extended use of the telegraph amongst the trading classes generally, but also to popularise the telegraph amongst the general public, and to induce a free resort to it under circumstances quite apart from commercial pursuits.

The Postmaster General is consequently desirous of ascertaining to what extent the experience of the * telegraphic administration bears out this impression, and as his Grace

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* Swiss, Belgian, as the case required.

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Grace is somewhat at a loss to determine the best mode of obtaining this information, he has decided upon again inviting your good offices, believing that he may confidently rely upon your doing him the favour of causing the requisite information to be collected and transmitted to him as speedily as possible.

At the same time I am to state that his Grace would be very glad to receive a map showing the telegraphic stations in * distinguishing, if possible, those which are at railway stations from those which are in the precints of towns which they serve.

I have, &c.
(signed) *Frank Ives Scudamore.*

Reply received from the Director General of Posts and Telegraphs at Brussels.

Monsieur le Directeur, Bruxelles, 29 Avril 1868.

Comme suite à votre lettre du 23 du courant, j'ai l'honneur de vous informer qu'au point de vue de l'objet des correspondances, les télégrammes de 1867 en Belgique se sont répartis, à l'intérieur, dans la proportion suivante—

Communication des Gouvernements et des offices diplomatiques	$\frac{1}{2}$
Nouvelles de bourse	$6\frac{1}{4}$
Transactions commerciales	$31\frac{2}{4}$
Relations privées et de famille	$58\frac{3}{4}$
Nouvelles pour les journaux	$2\frac{3}{4}$
	100

Comme vous pourrez le remarquer, le chiffre des relations privées et de famille l'emporte sur celui des transactions commerciales.

Je joins a la présente une carte du réseau des lignes telegraphiques belges. Les bureaux qui se trouvent en dehors du chemin de fer y sont indiqués par la lettre 'P.'

Une nouvelle carte est actuellement sous presse, et je m'empresserai de vous en envoyer une exemplaire, desqu'elle aura paru.

Veuillez agréer, Monsieur le Directeur, l'assurance de ma haute considération.

Au nom du Ministre, le Directeur Général,

(signé) *Fassiaux.*

A Monsieur le Directeur du General Post Office, Londres.

Reply received from the Swiss Telegraphic Administration.

Monsieur le Directeur Général, Berne, le 2 Mai 1868.

Nous avons l'honneur de vous accuser réception de vos deux lettres des 18 et 23 Avril de dernier de vous communiquer ci-après pour autant que cela nous est possible les renseignements qui y sont demandés.

Il existe en Suisse, sous la dénomination d'Imprimés, un tarif spécial pour les envois de circulaires, cartes de visites, épreuves d'imprimerie, etc. Le tarif pour les correspondances échangés à l'intérieur de la Suisse que nous vous addressons ci-joint contient, sous le titre "Imprimés," les details de la taxe et les conditions de son application.

Voici du reste le dénombrement des lettres, journaux, imprimés, mandats de poste, et articles de messagerie, qui ont été transmis par l'Administration des Postes Suisses les années 1866 et 1867.

Année.	Lettres Taxées.		Lettres Officielles non-taxées.	Totaux.
	Internes.	Internationales.		
1866 - -	26,512,075	9,719,492	3,165,658	39,397,225
1867 - -	27,553,615	10,143,159	3,137,087	40,834,561

° Switzerland, Belgium.

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Année.	Journaux.	Imprimés.	Mandats de Poste.	Articles de Messagerie.
1866 - -	28,490,029	4,381,606	422,687	4,914,835
1867 - -	28,502,766	4,662,413	509,253	5,021,428

En ce qui concerne les renseignements réclamés par votre susdite lettre du 23 Avril dernier, nous regrettons, Monsieur le Directeur Général, que notre statistique ne soit pas assez complète pour vous donner la proportion des correspondances télégraphiques classées d'après la nature d'affaires qu'elles ont pour objet. Mais nous pouvons affirmer que l'emploi du télégraphe en Suisse est bien loin de rester essentiellement entre les mains de certaines catégories de commerçants ou d'individus : cet emploi est devenu général, et les affaires particulières, les interêts de famille, les communications de tous genres, jouent un rôle tout aussi important que la banque, le commerce et l'industrie. Cette tendance à la généralisation de l'emploi du télégraphe par toutes les classes de la société s'est fait continuellement sentir à mesure que notre réseau se développait, mais la réduction de taxe de 1 fr. à 50 centimes, appliquée à dater du 1er Janvier 1868, l'a fait ressortir d'une manière très remarquable. En effet le nombre des dépêches internes expediées dans le premier trimestre de 1867, avec la taxe de 1 fr., s'étant élève à 76,744, il a presque doublé dans le même période de 1868, avec la taxe de 50 centimes, et a atteint le chiffre de 145,207.

Il est vrai que nous ne pouvons pas encore juger quelles seront les conséquences financières de la réduction de taxe en question, mais l'administration fédérale a toujours eu pour principe d'exploiter de télégraphie dans l'intérêt bien entendu du pays et non point dans un but fiscal.

Quant aux cas de fabriques situées à la campagne et reliés avec le comptoir de la maison en ville par une ligne télégraphique spéciale, ils sont encore exceptionnels chez nous, cependant ils sont prévus, et vous trouverez ci-joint un exemple de concession. Mais ce qui arrive très-fréquemment maintenant, c'est que nous installions dans les établissements privés, tels que fabriques, hôtels, pensions, bains, résidences privées, des bureaux télégraphiques reliés à notre réseau; nous joignons également ici une exemple des conditions sous lesquelles nous ouvrons de pareils bureaux.

Nous vous transmettons enfin, Monsieur le Directeur Général, une carte de notre réseau complétée au 30 Avril de l'année courante, où vous trouverez l'indication des bureaux télégraphiques de chemins de fer ouverts à la correspondance privée. Nous ajouterons seulement, contrairement à ce qui est affirmé à la page 43 de la brochure de l'Electric and International Telegraph Company, que les chemins de fer Suisses n'appartiennent point à la Confédération mais bien à des compagnies, et que ce n'est que par suite de conventions particulières que nous arrivons dans certains cas à employer pour notre service les télégraphes de chemins de fer. Il est juste de dire encore que la loi fédérale sur les chemins de fer qui est à la base des concessions de tous les chemins de fer suisses, assure à la Confédération le droit d'établir, sans indemnité, ses lignes télégraphiques le long des chemins de fer; elle concède en même temps aux compagnies de chemins de fer l'usage pour leur service d'un fil télégraphique spécial placé sur les poteaux de notre administration.

Espérant d'avoir ainsi satisfait aux questions que vous nous aviez adressées, nous vous prions d'agréer, Monsieur le Directeur Général, l'assurance de notre haute considération.

Le Département Fédéral des Postes.

Monsieur le Directeur Général des Postes, à Londres.

Enclosure to foregoing Letter.

CONVENTION concernant l'établissement d'un bureau télégraphique public à l'Hôtel Vevey (Grand Hôtel), près Vevey.

EN application de l'ordonnance du Conseil fédéral du 6 Août 1862, modifiée par décision du 1 Mars 1867, concernant les prestations pour l'établissement de lignes et bureaux télégraphiques, il a été convenu entre Monsieur L. Curchod, directeur des télégraphes, au nom de l'administration fédérale des télégraphes, et sous réserve de ratification du département fédéral des postes, et Monsieur Alfred Hirschy, au nom de la Société Immobilière de l'Hôtel de Vevey, ce qui suit :—

1. Un bureau télégraphique fédéral sera ouvert à l'Hôtel de Vevey, près Vevey.

2. La Société Immobilière de l'Hôtel de Vevey s'engage à cet effet aux prestations suivantes :—

a. À faire, construire, et entretenir à ses frais la fourniture de poteaux y comprise une

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une ligne télégraphique reliant l'Hôtel de Vevey avec le bureau des télégraphes à Vevey.

b. À fournir gratuitement un local convenable pour l'installation du bureau.

c. À payer à l'administration fédérale une somme annuelle de deux cents francs (200 f.) pour les frais de bureau.

3. L'administration des télégraphes prend de son côté les engagements suivants :—

a. Elle fournira gratuitement le matériel en fil de fer, isolateurs, supports manchons, appareils et leurs accessoires, ainsi que les formulaires et imprimées de service.

b. Elle accorde au bureau les émoluments suivants payables par trimestre :—

I. Un traitement annuel fixe de 180 f.

II. Une indemnité mensuelle pour menus frais de bureau de 2 f., pendant la durée de l'ouverture du bureau.

III. Une provision de 10 cents pour chaque dépêche expédiée ou reçue, à l'exception des dépêches officielles des administrations fédérales, des postes, et des télégraphes.

4. Le bureau télégraphique de l'Hôtel de Vevey sera desservi par un employé de l'hôtel, qui devra au préalable être agrée par l'administration fédérale, et qui sera soumis à ses ordres en ce qui concerne le service télégraphique. La signature de cet agent sera valable pour la correspondance officielle.

5. La Direction de l'Hôtel de Vevey, répresentée par M. Hirschy, garantit en son nom l'observation du secrêt des dépêches, la bonne gestion du bureau, et, en général, l'exécution de la présente convention. Il est tenu de fournir à cet effet un cautionnement personnel de mille francs.

6. Le bureau ainsi organisé sera traité au point de vue du service et de ses obligations, à l'égal de tous les autres bureaux télégraphiques de l'administration fédérale. Il percevra les recettes conformément aux tarifs et en versera le montant à la caisse d'arrondissement, suivant les prescriptions contenues dans les règlements administratifs. À la fin de chaque mois il rendra compte de sa gestion en envoyant à la direction des télégraphes à Berne une copie exacte de ses comptes de recettes. Il se chargera en outre de faire remettre à domicile toutes les dépêches qui lui seront adressées pour l'Hôtel de Vevey et ses environs, et cela conformément au règlement (voir l'ordonnance concernant l'emploi des télégraphes éléctriques en Suisse, du 17 Février 1859, arts. 12 et 13).

7. Le bureau de l'Hôtel de Vevey pourra à la volonté de l'Administration de l'Hôtel être ouvert tout l'année ou plusieurs mois de l'année seulement. Dans ce dernier cas le Directeur de l'Hôtel fixera chaque année la date de l'ouverture du bureau, en ayant soin d'en prevenir la direction des télégraphes 15 jours à l'avance. Les mêmes conditions seront applicables à la fermeture du bureau.

8. La présente convention est conclue pour le terme de dix ans, et demeurera valable et obligatoire pour tous successeurs des propriétaires actuels de l'Hôtel de Vevey, pendant le dit terme, qui échoira le 31 Décembre 1877. Dès cette époque elle pourra toujours être résiliée à la volonté de l'une des parties, moyennant un avertissement écrit, donné au moins six mois à l'avance, faute de quoi elle sera continuée de plein droit d'année en année. En cas de résiliation il est entendu que la ligne télégraphique depuis l'Hôtel de Vevey jusqu'au bureau des télégraphes de Vevey, restra en entier la propriété de l'administration des télégraphes.

9. En cas de conflit ou de contestation entre les agents des deux parties contractantes sur des détails quelconques d'éxécution, ou sur l'application et interprétation de la présente convention, les parties déclarent s'en rapporter à la décision souveraine, et sans appel, du Conseil fédéral.

Ainsi fait et expédié à double.

Berne, le 15 Juillet 1867.
Sous reserve de ratification,
Le Directeur des Télégraphes.

Vevey, le 10 Juillet 1867.
Au nom . . . .

(B.)

MEMORANDUM drawn up by the Director General of Belgian Telegraphs.

Gouvernement Britannique ayant présenté à la Chambre des Communes, un bill pour autoriser inistration des postes à acquérir et à exploiter des lignes télégraphiques, la compagnie dite ectric and International Telegraph Company" vient de publier un brochure afin de combattre les dérations invoquées dans l'exposé des motifs et, entre autres, les arguments empruntés aux itations télégraphiques de la Belgique et de la Suisse.

rédacteur de ce pamphlet a évidemment puisé dans les statistiques belges les renseignements qu'il e sur ce télégraphie de ce pays. Mais il est non moins évident qu'il n'a cité que les faits qui aient lui servir, en les isolant et en dénaturant au moins leur signification.

en jugera par les citations suivantes, en regard desquelles la rectification est inscrite d'après les officiels.

Citations.	Rectifications.
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e telegraphs of Belgium are of three ct sorts; internal, international, and it telegraphs. The system differs essen- from that of England, inasmuch as the ipal business of the Belgian telegraph transmit messages from one country to er, whilst the principal business of the ish telegraph is the conveyance of in- messages.	Cela veut dire clairement qu'en Belgique, les télégrammes internationaux et en transit sont beaucoup plus nombreux que les correspondances à l'intérieur. Comme la quantité annuelle de télégrammes en Belgique est représente par le chiffre 692,536, en haut de la meme page, le lecteur doit supposer que, dans ce nombre, les relations avec l'etranger entrent pour une part prépondérante. Voici les faits: en 1866, 1,128,005 télégrammes *en tout*, dont 692,536 à l'intérieur, soit 61 p. %. En 1867; 1,288,719 télégrammes, dont 817,652 à l'intérieur, soit 64 p. %. Disons, une fois pour toutes, que ces renseignements complets se trouvent dans les documents où l'auteur du pamphlet a puisé les assertions citées.
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1865 a convention was entered into een France and Belgium for the trans- on of international messages. Under convention considerable reductions were in rates for international and transit ages. In order equally to apportion ates, it became necessary to re-assess for the transmission of internal mes- , and the Belgian Government found *compelled* to lower its charge from one per message of 20 words to an uniform of half a franc. it it is to be observed that this was unwillingly done. It was done as a er of necessity, and not of choice. It done in face of the certainty that the ction would result in serious loss. The nal telegraph of Belgium had never at the charge of a franc per message; therefore, could not be expected to pay lf that rate.	Les grandes réductions et les taxes uniformes actuelles de la Belgique avec les pays voisins ont été appliqués: Le 1er Février 1861 avec l'Angleterre. Le 1er Octobre 1862 avec la Hollande. Le 1er Mai 1863 avec la France. Le 1er Décembre 1864 avec la Prusse. On voit que la Convention de 1865, conclue, non avec la France, mais avec tous les gouvernements européens, n'a plus opéré de réductions que sur des relations internationales très-peu importantes pour le trafic belge. Tous ces tarifs laissent à la Belgique, comme aux moindres réseaux des etats secondaires, une part *d'un franc par 20 mots*, à l'exception des correspondances de la Hollande avec l'Italie, trafic tout-à-fait insignifiant auquel on a voulu offrir une taxe égale, quelle que sert la vire suivre. Donc aucune nécessité de proportionner la taxe intérieure belge aux tarifs internationaux, et, si cette nécessité avait existé, aucune *obligation* de descendre à un demi-franc, taxe qui n'existait alors dans aucun pays, à part certaines relations locales. Le Gouvernement belge *n'a donc pas eu la main forcée* et n'a pas pris cette mesure à contre cœur. Il est vrai, et c'est la seule des assertions citées qui soit exacte, que le tarif à un franc n'était pas rémunérateur, le service intérieur étant supposé isolé de l'ensemble. Il est vrai qu'on ne s'est pas attendue à un gain immédiat, mais rien n'indiquait et rien ne prouve actuellement, malgre les circonstances desavantageuses des deux premières années, que la taxe d'un demi franc ne devienne pas une source de bénéfice, relativement aux résultats que l'on pouvait attendre de l'ancien tarif. Les statistiques belges de 1866 et de 1867 fournissent d'ailleurs avec *les plus grands détails* les arguments et les preuves à l'appui de ces appréciations.

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Citations.	Rectifications.
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They (the Belgian Government) reduced their rates for ordinary telegraphic messages at one end of the scale, whilst they raised their rates for effectual telegraphic messages at the other. In fixing lower rates, the Belgian Government by no means assured the same facilities to the public. The public were instructed that they must not consider the half-franc telegraph would ensure them either speed or accuracy. They must consider the message at a reduced price as a message which would be conveyed at about the speed of a railway train. The telegraph, in fact, was not to be regarded as a telegraph, but "as a post leaving and arriving at all hours."	Autant d'erreurs que de mots. Aucune taxe n'a *augumentée.* La réduction à 50 centimes s'appliq tous les télégrammes de ville à ville, c'est-à dire à *télégrammes sur mille.* L'anciénne taxe de 1 franc est *conservée* pour les grammes qui nécessitent un *enregistrement* et des *o tions accessoires* plus ou moins compliquées. Il y 48 *sur mille.* Enfin en payant la taxe de 2 francs, on obtie priorité de transmission qui autrefois se payait 3 fr Donc, là aussi, réduction et non aggravation. I 11 *télégrammes recommendés ou urgents sur mille.* indique suffisamment que le public se contente c vitesse des télégrammes ordinaires. Mais ceci réc quelques mots d'explications. Entre les bureaux télégraphiques importants du ré belge, il sécoule, *en moyenne,* 30 minutes depuis l'ins ou le télégramme est *déposé* au guichet de dé jusqua'à la remise au domicile du destinataire. De c minutes, 18 à 20 sont généralement requises pou remis à domicile, à partir du moment où la transmis *télégraphique* est achevée. La vitesse est quelquefois plus grande; les délais quelquefois plus longs, mais la moyenne observé dernier lieu est de 30 minutes, et il est permis de do qu'aucun service télégraphique puisse offrir, aux tions privées, une promptitude plus grande. Il v soi qu'entre bureaux secondaires, et lorsqu'il y a re-expéditions obligées les delais deviennent plus lo en Belgique, comme partout. Mais au Belgique, les centres de population d'affaires sont plus rapprochés que dans les autres p De Bruxelles un voyageur arrive à Vilvorde en minutes, à Malines en 20 minutes, à Anvers en minutes, à Louvain en 30 minutes. Il est clair que *ces relations,* certains télégrammes ne dépassent poi vitesse *d'un train de chemin de fer:* il ne reste alor télégraphe d'autre avantage que de *partir et d'arri toute heure* sans attendre le moment du départ d'un t ou de la distribution postale. C'est là, pour certa relationes télégraphiques belges, non pas une infér du service, mais une difficulté locale contre laquell doit lutter. *Il faut, pour satisfaire le public belge, vitesse télégraphique plus grande* que dans d'autres p où les centres principaux sont plus éloignés. arriver à ce résultat, les moyens de transmission ont multipliés de telle manière que la vitesse moyenne, de la réforme de 1865, *n'a diminué sur aucun point.* plus, on a conservé en la rendant moins onéreuse faculté de présenter des télégrammes *urgents* taxés francs. Quoique le prix n'ait rien d'exorbitant, on v de voir combien peu le public en fait usage. Sans examiner jusqu'à quel point la réforme b est applicable à l'Angleterre, nous devons déme l'assertion plus que hazardée d'après laquelle le ser rendu aurait perdu tout son mérite. *Cela n'a jam été annoncé au public belge, qui ne l'aurait point tolér*
Page 37.	
The increased revenue of the Belgian telegraph since the convention of 1865 is wholly attributable to the increased receipts for international and transit (not for internal) telegrams, and to the additional payments received for special or express messages, under the internal regulations.	S'il s'agit du produit *net,* il n'y a pas d'accroissem du revenu des télégraphiques belges depuis 1865. S'il s'agit du produit *brut,* voici la progression c stituée. Service intérieur: De 1865 à 1866, 18 % en plus. De 1866 à 1867, 15 % en plus. Service international et transit: De 1865 à 1866, 6½ % en plus. De 1866 à 1867, 8 „ „

Qu

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Quant aux surtaxes, on peut les évaluer comme suit :

	Francs.
Les 817,652 télégrammes de 1867 (service intérieur), s'ils avaient été taxés tous à 50 c. auraient rapporté -	408,826
La recette réelle a été - - -	462,749
Montant des surtaxes - - -	60,923

y compris la surtaxe des télégrammes qui ont plus de 20 mots.

Les faits démentent donc absolument les assertions de la brochure. Si le rédacteur avait dit qu'avant 1865, la situation financière exceptionnellement favorable des télégraphes belges (qu'ont remboursé tant lear capital d'établissement, ainsi que les extensions successive). était dûe surtout au trafic international, il aurait été dans le vrai.

C'est parce que cette ressource a cessé de s'accroître dans des proportions suffisantes pour compenser les frais de la télégraphique intérieure, que le Gouvernement belge a fait une tentative radiale et a cherché à obtenir, d'un tarif exceptionnellement bas, un développement de trafic très considérable. La situation financière susmentionnée lui permettait de risquer cette expérience et rien ne prouve qu'elle n'obtiendra pas le succès voulu.

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rther appears that the working ex-
in 1866 amounted to no less than
er cent. of gross receipts. And even
ge proportion is exclusive of the use
es at all the railway stations which
the hands of the Government, with
ighting, and furniture, and the use of
portion of the staff, who are paid by
vays, although performing telegraphic

Les documents belges mentionnent expressément 311,837 dépêches de service en 1866, et 361,440 en 1867, transmises gratuitement pour le service de l'administration et dans lesquelles le service télégraphique n'a qu'une part de 7½ p. %. Le reste est pour le chemin de fer et la poste. Ce travail supplémentaire qui attaint les 4/9 de la télégraphie privée n'a-t-il point d'importance et ne réclame-t-il pas une proportion notable des dépenses du télégraphe proprement dit ? Cela est parfaitement expliqué dans le compte-rendu de 1866.

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us appears that whilst the reduction
Belgian rate for messages to half a
as a compulsory reduction, it was by
ns a simple reduction, nor have the
enjoyed under it the same facilities for
nsmission of messages which they
l under the franc tariff. It also ap-
iat this reduction has entailed a serious
on the Government; and that, with all
vantages resulting from the gratuitous
ment of the officers of both the postal
ilway departments of the State, the
n system at the present time is a
commercially, as regards inland com-
tion, and is only supported and main-
by the business done in the transmis-
international and transit telegrams.

Ces trois assertions ont été rencontrées déjà; la réduction à ½ franc n'était nullement imposée au Gouvernement. Le public trove dans le service télégraphique actuel plus d'advantages qu'avant 1866, car le nombre de bureaux n'a pas cessé d'augmenter et la vîtesse de transmission este resté la même.

Enfin, s'il est vrai que lès télégrammes internationaux, d'après la répartition du travail, soient les seuls qui, *industriellement*, procurent un bénéfice, il faut remarquer que l'accroissement annuel de ce bénéfice est dû à l'augmentation considérable du trafic intérieur, qui a multiplié le nombre d'unités de travail. Fors, pour plus amples développements, les documents insérés aux Annales des Travaux publics, par analyser les résultats de 1866 et de 1867.

S'il est vrai que les deux premières années de la réforme aient subi une diminution de produit *net*, d'ailleurs peu importante, il ne faut pas en conclure qu'il y ait *échec*, car ces deux années étaient exceptionnellement défavorables à tout trafic quelconque. Le pire qui puisse arriver, c'est que le Trésor public restitue à ses actionnaires, c'est à dire au public belge, sous forme de bas tarif une partie des bénéfices de ses 15 premières années d'exploitation.

Page 39.

he case of ordinary half-franc tele-
the messages are not uniformly
ched by messenger from the office at
they arrive, but are sent to the resi-
of the receiver *by post!*

Le rédacteur de la brochure a-t-il pu croire sérieusement qu'en Belgique les télégrammes ordinaires sont distribués par *la poste* au destinataire ? Il y aurait donc en, en 1867, 770,000 dépêches (sur un mouvement total de 817,652), remises à la poste au lieu d'être portées à domicile par un messager spécial !

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CITATIONS.

The administration of the Belgian telegraph in no respect holds itself responsible for the delivery of a message, unless it is specially insured and additionally paid for. They decline all responsibility on account of delay in the transmission or non-arrival of a half-franc telegram. They will not even inquire into the cause of delay of a half-franc telegram. No matter how long a message has taken in delivery, or whatever may be the errors in it, the Government will make no compensation to the sender or receiver, except under very exceptional circumstances.

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It would appear from this, that delays and inaccuracies are of frequent occurrence in Belgium; that the diminution of efficiency is attributed more or less greatly to the reduction of the tariff; that the lines of wire are often blocked by comparatively unimportant messages; and that the transmission of a telegraphic message in Belgium often equals and sometimes exceeds the time that would be occupied in transmitting the same message by railway!

Let us inquire if the British public would be likely to submit tamely to all these delays, errors, and inconveniences in the administration of telegraphic communications by the post office; or would they not "*write to the Times*?"

It may be unquestionably concluded that such a system as that now existing in Belgium would never be tolerated in this country; and when it is considered that the Belgian system results in a large and annually increasing loss to the State upon the transmission of international messages, it cannot be imagined that any reasonable person would recommend its adoption in Great Britain.

RECTIFICATIONS.

Faut il expliquer ici que la taxe réduite n'est ap able qu' aux télégrammes à distribuer *dans le d'un bureau télégraphique*? Pour faire parveni dépêche hors de la ville à plus de deux kilomètr distance, il faut payer un exprès et recourir à l'a tarif d'un franc. Lorsque, malgré cette prescri l'expéditeur a employé un timbre de 50 centimes e le bureau de départ n'a pu rectifier l'erreur, le bu d'arrivée n'ayant aucun moyen de rentrer dans les de l'éxprès à longue distance *met le télégramme poste.* La même mesure est prise lorsque, par la de l'expéditeur, l'adresse est inexacte ou incomplet

Le transport par la poste est gratuit; néanmoi *ne s'applique tout au plus qu'a* 3,000 *télégrammes pa* dont plus de la moitié par suite d'adresse inexac incomplète.

L'assertion relative à la responsabilité de l'adm tration est tout aussi inexacte. S'il s'agit des *séquences* d'une erreur ou d'un retard, le Gouverne belge, il est vrai, décline toute responsabilité, de n que les autres Gouvernements européens, de même les compagnies anglaises. Celles-ci admettent l' rance moyennant une prime proportionnée au mo des dommages assurés, mais c'est la une spécul particulière, dont l'extension aux télégraphes tinentaux n'a jamais été réclamée.

Quant au remboursement des taxes, il est acc pour les télégrammes ordinaires non *parvenus* p fait de l'administration. En cas de retard ou d'er la taxe de ces télégrammes n'est pas remboursée, c'est surtout pour éviter l'instruction des réclama qui réclame un travail administratif hors de toute portion avec la valeur engagée.

Les personnes qui voudraient retrouver les ancie conditions, n'auraient qu'à payer l'ancienne taxe. cela n'arrive *jamais* en vue du remboursement, c permet de supposer que le public est satisfait.

Le rapport du post office (Juillet 1866) pub l'appui du bill du Gouvernement anglais contient réponse anticipée à de pareilles appréciations: " *revenant aussi souvent, 'dit-il,' sur des delais passeraient inaperçus en Angleterre, les administra balges fournissent une preuve frappante de la supér de leurs arrangements.*" Nous ajouterons volont " Une preuve frappante des difficultés qui leur imposées par la proximité des villes principales de pays." Nous avons déjà expliqué que la moy d'une demi-heure, entre le dépôt d'un télégramme remise un destinataire, atteint et dépasse mêm longuer de certains parcours par chemin de fer. E à dire que ce fait soit le cas général, pour tou réseau?

Nous irons plus loin. Entre certains bureaux rec dans certaines circonstances défavorables, on rencontrer des retards de 2 à 4 heures, comme ceux cite le rapport du post office (page 13), entre Lon et Southampton, Manchester, et Bolton, etc. An télégraphie n'est exempte de ces infirmités, et ceux en sont victimes se plaignent hautement, pa déraisonnablement en Belgique comme en Anglet " *Ecrire au Times*" est une ressource familière Belges comme au grand peuple qui les a guidé soutenus dans la conquête de toutes les libertés.*

Mais le système que la brochure attribue à la graphie belge ne serait toléré dans aucun pays civ et en *Belgique moins qu'ailleurs*, à cause des c distances.

* Récemment, un journal insérait la vive réclamation d'un particulier qui avait reçu un télégramme âgé d *ou dix heures.* Il a été constaté que la dépêche, parvenue régulièrement au domicile du destinataire, ne lui avai été remise par ses gens, qui ne s'étaient pas vantés de leur oubli. Des faits de ce genre se présentent très-fréquem L'Administration fait une enquête, corrige ce qui doit être corrigé, quand la *plainte est fondée*, et ne répond pa jamais.

Citations.	Rectifications.
Page 73.	
Vard Hunt well knows that the c rates of those countries do not e well knows that their half-franc illusory, and that if the Belgian ant the effectual use of their State they have to pay, not half a franc, nc and-a-half, at least, per message.	Il est vrai que la taxe belge d'un demi-franc n'est pas rémunérative jusqu'ici, mais la taxe d'un franc ne l'était pas non plus et ne le serait point devenue. Que dire, que penser de l'autre assertion? 817,652 télégrammes à l'intérieur en 1867, les Belges ont écrit et payé 770,003 dépêches à 50 centimes, et l'on supposerait qu'ils n'ont pas en un service télégraphique *effectif*? Ils ont, il est vrai, rémis 39,000 télégrammes spéciaux, mais c'était à cause des operations accessoires (réponses payées, exprès, copies, etc.), et non pour obtenir des garanties plus completes. Enfin ils ont demandé l'urgence 8 à 9,000 fois, environ, pour obtenir la privité de transmission. N'est ce par là une confirmation éclatante de la régularité d'un service, qui 99 fois sur cent. satisfait aux urgences d'un public très difficile à contenter?

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bornerons là nos observations. Il y a en Angleterre bon nombre de personnes qui s'occupent iveillance de la Belgique, et lui accordent un certain rang parmi les peuples civilisés. Ces s si, elles lisent la brochure de l'Electric and International Company, auront peine à se ue le service télégraphique belge ressemble au portrait de fantasie qui en a été tracé, pour ns de la cause. Si quelqu'un pouvait s'y tromper, il faudrait s'empresser de la rassurer sur gré de civilisation.
elles, Mai 1868.

Memorandum concerning Electric Telegraphs in *France*.

§ 1. *Organisation du Réseau.*

Organisation générale.

Actuellement l'administration possède des bureaux dans tous les chefs-lieux de départements, dans tous les chefs-lieux d'arrondissements, et, en outre, dans un grand nombre de chefs-lieux de canton, et même de simples communes. Le chiffre total de ces bureaux s'élève à près de 1,500, aux quels il faut ajouter environ mille stations de chemins de fer, qui, bien qu' instituées en vue de services spéciaux, sont néanmoins à la disposition du public pour la télégraphie privée.

En tenant compte de l'étendue de son territoire et de sa population, cette situation constitue pour la France un état de supériorité sur toutes les autres nations européennes.

Dans les chefs-lieux de département où le service télégraphique répond à des intérêts politiques et commerciaux d'un ordre général l'Etat a fait tous les frais d'établissement et prend à sa charge toutes les dépenses de l'exploitation.

Dans les chefs-lieux d'arrondissements où le bureau donne satisfaction à la fois aux besoins de l'administration et aux exigences locales, l'établissement des lignes s'est fait au compte de l'Etat; la gestion a lieu par ses soins, mais les villes doivent fournir le local nécessaire.

Dans les chefs-lieux de canton enfin, où la télégraphie a exclusivement en vue les intérêts locaux, les communes contribuent d'une part à la construction de la ligne, de l'autre à la gestion du bureau. Néanmoins l'Etat conserve encore, dans ce cas, la plus grande partie des charges, en entrant pour les deux tiers environ dans les dépenses de premier établissement, et en assurant la rétribution de l'agent.

Pour former l'ensemble du réseau, ces trois catégories de bureaux sont reliées d'après les principes suivants:—

Les bureaux cantonaux sont rattachés aux chefs-lieux d'arrondissement qui centralisent leurs correspondances. Les chefs-lieux d'arrondissement, à leur tour, aboutissent aux chefs-lieux de départements, et ces derniers sont groupés, par région, autour d'un centre de dépôt désigné par son importance naturelle ou sa situation géographique. Enfin les centres de dépôt sont munies de communications rayonnant dans tous les sens, qui les unissent entre eux.

Au premier examen, ce système peut paraître crier bien des intérmediaires qu'une autre organisation permettrait d'éviter. Mais il convient de remarquer que la plus grande quantité de dépêches partant des grands centres sont transmises directement à leur destination immédiate, et que le nombre des dépôts n'augmente que pour les bureaux où le mouvement de correspondances est plus faible. La multiplicité de la direction à suivre, en sorte que la transmission s'effectue dans des conditions de rapidité suffisantes, et avec toutes les garanties d'exactitude désirables.

D'ailleurs, toute en admettant la centralisation successive comme règle générale, l'administration ne l'applique pas d'une manière absolue, et toutes fois que, par suite de la proximité ou de la communautés d'intérêts, il se manifeste, entre deux localités appartenant

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à des régions différentes, un courant naturel de relations, elle y pourvoit au moyen de communications auxiliaires.

De cette organisation découle l'obligation de proportionner les resources dont dispose chaque bureau à l'importance de ces fonctions.

Lignes.

Ainsi, les centres de dépôt éloignés les unes des autres et ayant entre eux un échange de dépêches constant, sont rélies par des conducteurs de cinq millimètres de diamètre offrant peu de resistance au passage du courant. Ces fils sont espaces de cinquante centimètres sur les poteaux dans le but d'atténuer les effets de dérivations par les influences atmosphériques. Les lignes elles-mêmes sont l'objet d'une surveillance active et continue.

Les chefs-lieux d'arrondissement sont reliés aux chefs-lieux de département par des fils de quatre millimètre, placés à une distance de 35 à 40 centimètres.

Les lignes cantonales, toujours courtes et composées le plus souvent d'un nombre restreint de fils, portent des conducteurs de trois millimètres et ne réclament pas une surveillance aussi assidue.

Le tableau suivant indique quelles sont dans ces conditions les dépenses d'une ligne principale avec des fils de cinq et de quatre millimètres, et d'une ligne secondarie composée de conducteurs de trois millimètres.*

Indications des Travaux.	Fournitures.	Transports.	Main d'œuvre et frais de surveillance.	Total.
Lignes Principales.	*francs.*	*francs.*	*francs.*	*francs.*
Achat, transport et plantation des poteaux (poteaux de 8 mètres comme appuis ordinaire, et de 10 mètres comme appuis d'exhaussement).	156	27	37	220
Pose d'un fil de 5 m/m.				
Achat, transport et installation des isolateurs et du fil.	100	5	10	115
Pose d'un fil de 4 m/m.				
Achat, transport et installation des isolateurs et du fil.	77	3	8	88
Lignes d'importance secondaire.				
Achat, transport et plantation des poteaux (poteaux de 6 mètres comme appuis ordinaire et de 8 mètres comme appuis d'exhaussement).	100	22	25	147
Achat, transport et installation d'un fil de 3 m/m et des petits isolateurs à la supporter.	50	2	7	59

Appareils.

De même que les lignes, les appareils varient suivant la catégorie des bureaux.

L'appareil Hughes, doué d'une grande puissance de transmission, et pouvant écouler 50 à 60 dépêches par heure et par fil, est affecté aux communications des centres de dépôts.

Pour celles des chefs-lieux de départements avec leur centre de dépôt, et des chefs-lieux d'arrondissement avec les chefs-lieux de département, l'appareil généralement en usage est l'appareil Morse, perfectionné par le système Digney, qui a substitué un trait à l'encre indélébile, facilitant la lecture et le controle à un gaufrage du papier qui n'etait perceptible que dans des conditions de lumière particulières, et que la pression faisait disparaître. Si le mouvement des correspondances est continu, l'appareil Hughes est substitué à l'appareil Morse. Quant aux communications cantonales, elles s'effectuent par l'appareil a cadran dont les signaux sont fugitifs, mais que la facilité de sa manipulation rend, en quelque sorte, accessible à tous.

Le

* En ce qui concerne les travaux accessoires des lignes souterraines employées dans l'intérieur des grandes villes et des lignes sousfluviales ou sous-marins, il est à peu près impossible de donner une évaluation approchée, le montant des dépenses réelles variant notablement dans chaque cas particulier, suivant les conditions dans lesquelles s'éxecute le travail projété. On peut dire, toutefois, que les lignes souterraines établies dans ces derniers années dans les villes de Frances les plus importantes, comprennent généralement de 20 à 30 conducteurs, et quelles ont couté environ mille francs per kilomètre et par fil, tant pour l'achat du matériel que pour les frais de main d'œuvre. L'administration emploie pour ces lignes souterraines des cables à sept conducteurs en cuivre, tous les cables d'une ligne sont enfermés dans des tuyaux en fonte enfouis au fond de tranchés d'un mètre environ de profondeur. Dans certains cas, les cables sont suspendus aux voutes des égouts ou des tunnels. Il sont alors recouverts d'une gaine de plomb continue.

Le personnel et la durée du service des différents bureaux sont constitués d'après les mêmes principes.

Personnel. 1° des Bureaux.

À la tête de chaque centre de dépôt se trouve un directeur assisté de commis principaux chargés de la surveillance de détail, et ayant sous ses ordres un nombre d'employés en rapport avec la quantité de fils et le mouvements des correspondances. Suivant le plus ou moins d'importance, le service est permanent pendant le jour et la nuit ou prolongé seulement jusqu'à minuit.

Dans les chefs-lieux de département, le bureau comporte un direction, et les employés nécessaires. Il reste ouvert depuis 7 heures du matin en été, huit heures en hiver, jusqu'à 9 heures du soir.

Dans les chefs-lieux d'arrondissement, le bureau est desservi d'après l'importance locale, soit par un chef de station et des employés, avec un service de jour complet, soit avec un service limité, de 9 hrs. du matin à 7 h. du soir, par un employé ou un agent auxiliaire choisi parmi les anciens serviteurs de l'Etat ou les membres de leurs familles.

Dans ces trois catégories de bureaux, le personnel dépend uniquement de l'administration et se consacre exclusivement à son service.

Pour les bureaux cantonaux, la gestion a lieu par les soins de la municipalité. Elle est confié à un habitant de la localité, employé déjà à quelque fonction publique, tel que le sécrétaire de mairie, l'instituteur communal, le receveur des postes, &c. Le travail accessoire, que lui impose le service télégraphique, est remunéré par l'administration au moyen de remises proportionelles au nombre des dépêches. Les bureaux de cette catégorie fonctionnent pendant la semaine de 9 h. du matin à midi, et de 2 h. à 7 h. de soir, et le dimanche pendant une heure du matin et une heure le soir.

Personnel supérieur.

Le personnel chargé des transmissions est soumis à l'autorité et au contrôle de fonctionnaires supérieures dont l'action s'étend dans une circonscription déterminée, sur tous les détails du service.

La superficie de l'Empire est partagée en huit grandes divisions, chacune comprenant un ou deux centres de dépôt, et embrassant généralement le parcours d'une grande ligne avec des ramifications. Un inspecteur divisionnaire est à la tête de chaque région. Avec l'aide des sous-inspecteurs, qui lui sont adjoints, il demeure responsable de l'Etat du réseau principal et du service général des transmissions dans toute l'étendue de sa circonscription. Sous son autorité, un inspecteur est constitué chef de service dans chaque département. Le fonctionnaire a pour mission d'effecteur les constructions de lignes et de l'ouverture des nouveaux bureaux, de présider à la surveillance et à l'amélioration des lignes existantes, enfin de contrôler le service des stations.

Tel est actuallement l'ensemble de l'administration télégraphique de la France. Les principes qui lui servent de base ne sont pas arbitraires ; ils ont été adoptés d'après la constitution générale du pays, et les résultats de l'expérience, à mesure que le developpement du service éxigeait une organization plus complete.

§ 2. *Tarifs.*

Tarifs.

En même temps, du reste, que l'extension des communications télégraphiques vulgarisent ce moyen précieux de correspondance, l'administration en rendait l'usage plus facile au public par une réduction progressive de ses tarifs et la concession de nouveaux avantages.

La loi du 29 Novembre 1850, qui a posé les premières bases de la télégraphie privée, avait stipulée pour la taxe des dépêches un droit fixe de 3 fr. pour 20 mots, augmenté du 12 centimes par myriamètre, en calculant la distance d'après la longueur réelle de la ligne parcourue, le tout accru d'une surtaxe de 50 centimes pour le port à domicile.

La loi du 28 Mai 1853 apporta une première réduction en abaissant la taxe à 2 francs de droit fixe, plus 10 centimes par myriamètre.

Ces réductions deviennent progressivement de plus en plus fortes sous l'empire des lois :

Du 22 Juin 1854, qui prit pour base du calcul la distance à vol d'oiseau, et tout en rétablissant le droit proportionnel à 12 centimes par myriamètre, eleva de 20 à 25 le nombre de mots de la dépêche simple ;

Du 21 Juillet 1856, qui ramena le droit proportionnel au chiffre de 10 centimes par myriamètre, mais en réduisant la longeur de la dépêche simple à 15 mots de texte et 5 mots d'adresse, et supprima les frais de port à domicile ;

Du 18 Mai 1858, qui admit une taxe uniforme de 1 fr. pour les dépêches circulant dans l'intérieur d' un même département, et de 1 fr. 40 pour celles qui séraienté changées entre des départements limitrophes ;

Enfin de la loi du 3 Juillet 1851, qui apportant une modification radicale dans le système des taxes, substitua au régime proportionnel un tarif uniforme de 1 fr. par 20 mots pour les dépêches ne sortant pas des limites du département et de 2 frs. pour les autres dans toute l'étendue de l'Empire.

Le tableau suivant, où sont reproduites les taxes successives d'une dépêche de Paris pour trois ou quatre points différents accuse l'importance de ces réductions.

App. No. 1.

Taxe d'une dépêche simple de Paris pour

	Le Havre.	Lyons.	Bordeaux.	Marseilles.
Loi du 28 Nov. 1850 (20 mots) - -	6·26	9·62	10·46	13·82
Loi du 28 Mai 1853 (20 mots) - -	4·80	7·61	8·30	11·10
Loi du 22 Juin 1854 (25 mots) - -	4·06	7·30	8·50	11·08
Loi du 21 Juillet 1856 (15 mots de texte and 5 mots d'adresse) - - -	3·80	6·00	7·00	8·70
Loi du 2 Juillet 1861 (20 mots) - -	2·00	2·00	2·00	2·00

Ces taxes sont encore en vigueur aujourd'hui; mais depuis le 3 Juillet 1861, l'administration n'est pas, cependant, restée stationnaire, et deux nouvelles lois ont étendus les avantages et les facilités déjà accordées au public.

L'une, la loi du 27 Mai 1863, a inauguré deux nouveaux services, celui des communications sémaphoriques sur lesquels je reviendrai tout-à-l'heure, et celui des transmissions autographiques, système qui est peut-être le *desideratum* de l'avenir, mais qui, quant à présent, ne parait pas répondre à un besoin bien caractérisé; il ne fonctionne qu'entre Paris et Lyon, encore son usage est-il très restreint sur cette ligne. Peut-être les résultats obtenus jusqu'à ce jour ne sont-ils pas entièrement étrangers au peu d'empressement du public;—l'appareil, tout en présentant une magnifique solution du problème de la transmission autographique, n'a pas atteint son complet perfectionnement, et les reproductions qu'il donne peuvent laisser quelquefois à désirer sous le rapport de la netteté et de l'authenticité même.

La séconde, la loi du 13 Juillet 1866, a permis d'assurer aux dépêches une garantie absolue d'exactitude par la recommandation de les composer en chiffres ou lettres secrètes; et de les *faire suivre* en cas d'absence du destinataire. En outre elle a substitué à l'opération un peu lente de la perception de la taxe en numéraire, l'affranchissement plus rapide au moyen de timbres dépêches.

L'administration ne s'est pas arrêtée d'ailleurs, dans la limite des réductions quelle compte apporter à ses tarifs, et les taxes déjà faibles de 1 f. et de 2 f. seront, sans doute, très prochainement réduites à cinquante centimes et à un franc.

§ 3. *Résultats de l'exploitation.*

Le résultat naturel de ces réductions successives des taxes et de ces facilités nouvelles dans l'échange des dépêches a été d'en multiplier le nombre en sorte que, malgré les diminutions considérables, opérées sur les tarifs, le chiffre des recettes à suivi néanmoins une progression croissante. Mais, de leur côté, les dépêches ont dû être augmentées en proportion pour maintenir un équilibre constant entre les ressources et les besoins.

Cette situation est accusée par les deux tableaux comparatifs ci-annexées, par lesquels sont récapitulés les depenses et les recettes effectives depuis l'inauguration du service jusqu'au 1 Janvier 1866.

Pour apprécier exactement la valeur de ces chiffres, il importe de remarquer que le service télégraphique fait gratuitement toute la correspondance de l'Etat, qui s'est élevée, en 1865, à 568,647 dépêches. Si l'on tenait compte des recettes correspondantes (1,800,631 f. 81 c.) qui ne sont mentionées que pour mémoire, le budget de la télégraphie se serait soldé dès 1865, par un bénéfice de près d'un million.

D'un autre côté, toutes les dépêches que les compagnies de chemin de fer expédient pour le service de leur exploitation, n'entrent pas dans ces évaluations. Les bénéfices dont l'administration est privée de la sorte sont composés, en partie, par les services que les compagnies lui rendent en transportant, sans frais, son matériel et son personnel.

§ 4. *Service sémaphorique.*

Je n'ai encore fait qu'indiquer l'existence d'un réseau exploité également par l'Etat et qui se développe à côté du réseau général, celui des communications sémaphoriques.

Les sémaphores sont des postes établis sur le littoral de l'Empire qui sont reliés électriquement par des fils spéciaux à l'ensemble du réseau, et sont munis en outre d'un système de signaux qui leur permet de communiquer avec les navires en mer. Au point de vue des intérêts généraux, ces postes ont la triple mission de surveiller les côtes, de rendre compte de la situation de la mer, de transmettre et de recevoir les communications des batiments de guerre avec les autorités maritimes.

Leur rôle ne se borne pas à ce service. Ils font, en outre, participer au bénéfice de la télégraphie

télégraphie les localités voisines des points où ils sont établis, et, en outre, servent d'intermédiaires pour les communications privées entre les batiments en mer et les divers points du territoire. Le personnel des sémaphores se récrute parmi les agents du Ministère de la Marine dont il continue à faire partie. App. No. 1.

Ces communications, d'une nature toute particulière, s'effectuent au moyen des signaux du code commercial, des signaux à l'usage des navires de toutes les nations qui a été préparé de concert par l'Amiraute britannique et le département de la Marine en France, et qui, adopté depuis par un grand nombre de nations, semble à dévenir par la suite la langue maritime universelle.

Ces dépêches (dites dépêches maritimes) ne sont astreintes à d'autres conditions que celles du mode de communications employé pour les signaler. Leur taxe est la même que celle d'une dépêche terrestre de même nature, augmenté de 2 francs par 20 mots pour transmission maritime.

Il parait superflu d'insister pour faire ressortir les advantages que présente ce mode de communication. Le gouvernment des Etats-Unis, plus que tout autre, est en même de les apprécier.

§ 5. *Réseau international.*

Avant de terminer, il reste à dire un mot des relations télégraphiques de l'Empire avec les autres pays.

Paris est relié dirèctement, par plusieurs fils, aux capitales des Etats limitrophes. En outre, les grands centres et les points rapprochés des frontières, sont également en communication avec les villes étrangères qui les avoisinent.

Les grandes lignes internationales sont constituées généralement avec des fils de gros diamètre (5 millimètres), et celles où les travail est le plus actif, les lignes de Berlin, Vienne et Florence, par exemple, sont desservies par des appareils Hughes.

La télégraphie internationale est soumise aux dispositions de la Convention conclue à Paris en 1865, qui a adoptée des règles uniformes non seulement pour toutes les questions principales, mais encore pour les détails sécondaires du service. Convention de Paris.

Ce document, qui a été préparé avec le concours des directeurs généraux de toutes les administrations télégraphiques de l'Europe, et qu'une révision périodique maintiendra constamment au niveau des découvertes de la science et des progrès l'exploitation, a été successivement adopté par presque tous les gouvernements que n'avaient pas participé à sa formation, et, sortant des limites de l'Europe, il tend à se généraliser sur toute l'étendue de l'ancien continent.

La Russie et la Turquie y ont adhéré pour leurs possessions d'Europe et d'Asie, la Tunesie et l'Algére reliées à l'Europe par l'intermédiaire des lignes italiennes lui sont soumises. La Compagnie des Indes demande à l'adopter.

Dans l'ancien monde, la Perse et l'Egypte ont seule maintenu encore des règlementations spéciales, mais il y a tout lieu de croire que ces deux Etats ne demeureront pas isolés, et se rallieront, dans un avenir prochain, au régime partout en vigueur autour d'elles.

A ce moment, la généralisation des règles arrétées par la conférence de Paris serait completes, si les circonstances permettaient au nouveau monde de les appliquer dans leurs rapports avec l'ancien.

Pour completer ces divers renseignements, je joins à cette lettre un exemplaire des documents suivants dont l'examen permettra se rendre compte dans le détail de l'organisation d'un service dont je n'ai qu'exposé les principes.

1. Loi organique du 29 Novembre 1859.
2. Décret d'administration publique du 8 Mai 1867.
3. Circulaires explicatives du 30 Juin et du 23 Septembre 1867 (No. 419 and 421).
4. Instruction sur le service sémaphorique.
5. Tableau du produit des bureaux de l'Etat en 1866.
6. Nomenclature du réseau.
7. Convention de Paris.

THE PNEUMATIC SYSTEM in connection with ELECTRIC TELEGRAPHS in *Paris.*

Il y a un an ou quinze mois qu'on creusa un énorme fossé aux Boulevards, et au fond de ce tranchée on installa un tube souterrain pour le transport des dépêches télégraphiques. Ce tube décrit une vaste ellipse, à peu près regulière, qui part tu Ministère de l'Intérieur (rue Grénelle) et y revient, en passant par la rue des Saints Pères, le Caroussel, la Poste (rue J. J. Rousseau), la Bourse, le Grand Hotel, la rue Boissy d'Anglas, et la Place de la Concorde, soit huit stations sur la longueur du trajet.

Dès l'établissement de la Télégraphie on a centralisé au Ministère de l'Intérieure, rue Grenelle, l'arrivée et le départ de toutes les dépêches de la province. L'augmentation rapide du nombre des dépêches, cependent, a crée une difficulté quant à la distribution. Or, la rapidité du télégraphe perd toutes les avantages quant la distance à parcourir

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devient trop petite; on n'aurait jamais eu assez de facteurs. Donc on a crée un certain nombre de bureaux télégraphiques spéciaux communiquant au Bureau Central de la rue Grenelle par des fils électriques. Mais il arriva bientôt que ces bureaux de distribution furent encombrés, et on est arrivé forcément à faire partir des dépêches de la rue Grenelle aux différents postes de distribution, non par des fils (qui étaient devenus insuffisants), mais par des voitures. C'était plus la télégraphie et on devait chercher mieux. Un ingénieur de l'administration des télégraphes eut l'idée d'appliquer le système atmosphérique, convenablement modifié au transport des dépêches dans Paris. Son système fut adopté et existe. On a établi sous les chaussées de certaines rues un tuyau en fer de six centimètres de diamètre, formant un circuit complète suivant l'itinéraire indiqué plus haut. Dans chacun des bureaux traversés on a installé une machine qui comprime de l'air et chasse dans le tuyau une petite boite en métal. Cette boite voyageuse chassée par la pression atmosphérique court dans le tuyau et au bout de deux ou trois minutes sort du tube dans le bureau suivant. Tous les quarts d'heures un convoi de petites boites part de la rue de Grenelle, traverse tous les bureaux du circuit ou il s'arrête. On ouvre les boites, on y prend les dépêches, on les remplie par d'autres, et elles continuent leur route circulaire pour revenir à leur point de départ. Le trajet dure à peu près vingt minutes, les six arrêts dans les bureaux en prennent à peu près quarante.

Statistical Information relating to Electric Telegraphs in certain Continental States.

France.

The French system, which is under the control of the State, comprised in 1866:

32,225 kilometres of telegraph lines, with
110,517 „ of wires.

Equal to 20,628 and 68,687 English miles respectively.

1,209 stations were open to the public.

The number of messages amounted to 2,842,554.

The gross receipts: Francs, 7,707,590 = 308,304 *l.* sterling.

The receipts are divided as follows:—

301	stations collect	less than	200	francs	each.
179	„ „	from	200 to	500	francs each.
185	„	„	500 to	1,000	„
354	„	„	1,000 to	5,000	„
84	„	„	5,000 to	10,000	„
63	„	„	10,000 to	30,000	„
17	„	„	30,000 to	50,000	„
12	„	„	50,000 to	100,000	„
6	„	„	100,000 to	200,000	„
4	„	„	200,000 to	300,000	„
2	„	„	300,000 to	400,000	„
1	„	„	527,000		
1	„	„	620,000		
1,209	Total				

These stations are situated in 89 provinces ("Départements"), viz.:—

1.	Département	de la Seine,	collecting 2,822,367	francs.
2.	„	Bouches de Rhone	747,228	„
3.	„	Seine inférieure	608,737	„
4.	„	Rhone	348,514	„
5.	„	Nord	265,705	„
6.	„	Gironde	260,615	„
7.	„	Loire inférieure	139,797	„
8.	„	Haut Rhin	135,483	„
9.	„	Hérault	134,388	„
10.	„	Alpes Maritimes	101,183	„

Nine other Départements collect annually between 90,000 down to 50,000 francs, the remaining 70 from 49,000 down to 4,653 francs.

Paris (Département de la Seine) has 46 stations within the fortifications. The gross receipts amounted in 1866 to 2,794,768,40 francs = 111,791 *l.* sterling, being more than one-third of the total receipts of the whole empire.

The

The receipts in Paris are divided as follows:

Place de la Bourse	527,906	francs.
Rue de Grenelle (Central)	283,972	„
Grand Hotel	271,880	„
Rue Lafayette	250,967	„
Rue J. J. Rousseau	198,465	„
Rue St. Cécile	139,916	„
Aux Champs Elysées	131,059	„
Hotel du Louvre	113,246	„

Six other stations collect from 85,000 to 50,000, six from 50,000 to 20,000 francs; the remainder from 19,000 down to 2,123 francs.

Austria.

The telegraph is under the entire control and management of the State, and was first inaugurated in 1848.

At the end of 1866 the system comprised 851 stations with an extent of 7,385 4 geographical miles of wire.

The gross receipts amounted to 1,644,742 florins = say 137,022 *l.*

The number of messages during the year 1866 = 2,507,472.

The total number of persons employed by the telegraph = 1,884.

Belgium.

The telegraph system, as in most continental states, is exclusively in the hands of the Government; the Post Office, Railroads, and Telegraphs forming a considerable item of public revenue. It comprised at the end of 1866:

3,519 kilometres telegraph lines, with
9,989 „ „ wires,

equal to 2,187 and 6,146 English miles respectively.

The total cost of constructing these lines up to December 1866 amounted to 2,055,083 francs = to 82,203 *l.* 2 *s.* 5 *d.*, being at the rate of about 37 *l.* 1 *s.* 9 *d.* per mile of line, and of 13 *l.* 7 *s.* 6 *d.* per mile of wire.

The total of gross receipts since the establishment of telegraphs in 1851, till the end of December 1866, amounted as per annexed table to 7,704,373 francs.

The total expenditure of working and maintaining the line during the same period was 4,801,795 francs.

Leaving a net profit of 2,902,578 francs.

Table showing the Progress of Telegraphy in *France.*

	Number of Messages Annually.	Gross Receipts Annually.	Average Cost per Message.
		Francs.	*Fr.* *Ct.*
1851	9,014	70,722	7 84
1852	48,105	542,891	11 28
1853	142,061	1,511,909	10 64
1854	236,018	2,064,983	8 74
1855	254,532	2,487,159	9 77
1856	360,249	3,191,102	8 18
1857	413,616	3,333,695	8 06
1858	463,973	3,516,633	7 60
1859	598,701	4,022,799	6 72
1860	720,250	4,188,065	5 81
1861	920,357	4,919,737	5 34
1862	1,518,044	5,302,440	3 49
1863	1,754,867	5,937,904	3 38
1864	1,967,748	6,123,272	3 13
1865	2,473,747	7,052,139	2 88
1866	2,842,554	7,707,590	2 79

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TABLE showing the Progress of Telegraphy in *Belgium*.

	Number of Messages Annually.	Gross Receipts Annually.	Average Cost per Message.
		Francs.	*Fr. ct.*
1851	14,025	88,674	6 32
1852	27,217	165,973	6 07
1853	52,050	265,536	5 10
1854	60,415	280,845	4 65
1855	61,443	265,939	4 33
1856	99,273	359,579	3 62
1857	119,050	407,011	3 42
1858	145,726	413,926	2 83
1859	196,240	506,006	2 57
1860	225,819	527,743	2 34
1861	268,968	588,532	2 19
1862	291,787	605,044	2 07
1863	416,113	612,313	1 47
1864	544,497	789,399	1 44
1865	674,037	865,000	1 28
1866	1,128,005	962,213	0 85

TABLE showing the Progress of Telegraphy in *Austria*.

	Number of Messages Annually.	Gross Receipts Annually.	Average Cost per Message.
		Florins.	*Florins.*
1851	44,911	128,736	2 86
1852	62,716	209,547	3 34
1853	109,347	308,159	2 81
1854	190,522	549,697	2 88
1855	204,221	607,745	2 97
1856	251,948	778,294	3 08
1857	381,720	888,905	2 32
1858	419,449	760,811	1 81
1859	692,379	951,240	1 37
1860	700,795	991,275	1 41
1861	846,675	1,226,404	1 44
1862	946,675	1,267,966	1 33
1863	1,130,625	1,290,447	1 14
1864	1,610,663	1,322,945	0 82
1865	1.786,955	1,435,478	0 80
1866	2,507,472	1,644,742	0 65

STATEMENT showing the Progress of Telegraphy in *France*.

	Number of Messages Annually.			Gross Receipts per Annum in Francs.			Average Cost per Message.		
	Home.	Foreign.	Total.	Home.	Foreign.	Total.	Home.	Foreign.	Total.
				Fr. ct.	*Fr. ct.*	*Fr. ct.*	*Fr. ct.*	*Fr. ct.*	*Fr. ct.*
1851	-	-	9,014	- -	- -	76,722 60	- -	- -	7 84
1852	-	-	48,105	- -	- -	542,891 58	- -	- -	11 28
1853	-	-	142,061	- -	- -	1,511,909 57	- -	- -	10 64
1854	-	-	236,018	- -	- -	2,064,983 71	- -	- -	8 84
1855	-	-	254,532	- -	- -	2,487,159 21	- -	- -	9 77
1856	-	-	360,299	- -	- -	3,191,102 04	- -	- -	8 68
1857	-	-	413,616	- -	- -	3,333,695 74	- -	- -	8 06
1858	349,887	114,086	463,973	1,794,918 35	1,721,715 35	3,516,633 70	5 13	15 09	7 60
1859	453,998	144,703	598,701	2,072,314 15	1,950,485 63	4,022,799 78	4 57	13 48	6 72
1860	568,365	151,885	720,250	2,358,525 21	1,829,540 05	4,188,065 26	4 15	12 05	5 81
1861	734,252	186,357	920,357	2,840,445 84	2,079,292 12	4,919,737 96	3 82	11 16	5 34
1862	1,291,774	226,270	1,518,044	2,984,490 21	2,317,950 34	5,302,440 55	2 31	10 24	3 49
1863	1,490,023	264,844	1,754,867	3,305,993 85	2,631,911 08	5,937,904 93	2 22	9 94	3 38
1864	1,654,406	313,342	1,967,748	3,565,933 68	2,557,338 38	6,123,272 06	2 15	8 16	3 13
1865	2,098,645	375,102	2,473,747	4,159,445 45	2,892,694 34	7,052,139 79	1 98	7 71	2 88
1866	2,379,681	462,873	2,842,554	4,513,095 32	3,194,495 29	7,707,590 61	1 90	6 90	2 79

Cost of Construction.

Bavaria, 2,115 miles lines. } flor. 843,207.
4,945 „ wire. } 70,267 *l.* 5*s.*
Equal to 33 *l.* 4 *s.* 5 *d.* per mile of line.
„ 14 *l.* 4 *s.* 2 *d.* „ of wire.

Belgium, 2,187 miles of line. } frs. 2,055,083.
6,146 „ of wire. } 82,203 *l.* 6 *s.* 6 *d.*
Equal to 36 *l.* 4 *s.* 4 *d.* per mile of line.
„ 13 *l.* 7 *s.* 6 *d.* „ of wire.

France, 20,028 miles of line. } frs. 23,800,791.
68,687 „ of wire. } 952,031 *l.* 13 *s.*
Equal to 47 *l.* 1 *s.* 8 *d.* per mile of line.
„ 13 *l.* 10 *s.* 4 *d.* „ of wire.

This item includes the construction of:—
354 miles submarine lines, and
884 „ semaphore with 1310 miles of wire.

Annual Expenditure.

Bavaria, florins 258,625 = 21,552 *l.* 1 *s.* 8 *d.*
Equal to 4 *l.* 7 *s.* 2 *d.* per mile of wire.

Austria

Belgium, francs 839,947 = 33,597 *l.* 17 *s.* 8 *d.*
Equal to 5 *l.* 9 *s.* 3 *d.* per mile of wire.

France, francs 8,983,460 = 359,338 *l.* 8 *s.*
Equal to 5 *l.* 4 *s.* 8 *d.* per mile of wire.

Gross Receipts.

Bavaria, florins 322,886 = 26,907 *l.* 3 *s.* 4 *d.*
Equal to 5 *l.* 8 *s.* 10 *d.* per mile of wire.

Austria, florins 1,644,742 = 137,061 *l.* 16 *s.* 8 *d.*
Equal to 4 *l.* 3 *s.* per mile of wire.

Belgium, francs 968,213 = 34,482 *l.* 10 *s.* 4 *d.*
Equal to 5 *l.* 12 *s.* 7 *d.* per mile of wire.

France, francs 8,810,283 = 352,411 *l.* 6 *s.* 4 *d.*
Equal to 5 *l.* 2 *s.* 8 *d.* per mile of wire.

RECAPITULATION.

	Cost per Mile of Wire.	Receipts per Mile of Wire.	Expenditure per Mile of Wire.	Net Profits per Mile of Wire.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Bavaria - - - -	14 4 2	5 8 10	4 7 2	1 1 8
Belgium - - - -	13 7 6	5 12 7	5 9 3	0 3 4
Austria - - - -	?	4 3 –	?	—
France - - - -	13 10 4	5 2 8	5 4 8	Loss, 2 0

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PAPER handed in by Sir *Charles Wheatstone*, 6 July 1868.

INSTRUCTIONS for the Employment of Wheatstone's Cryptograph.

Memorandum with reference to the Employment of Wheatstone's Crytographs* for Military Purposes.

These instruments have been invented for the formation of cypher. With them, by means of an internal mechanical arrangement, permutations of the letters of the alphabet, infinitely more complicated than any that can be calculated mentally, are produced. With the aid of these instruments an extensive secret correspondence can be carried on with several persons, and a separate cypher can be employed for each person.

The letters or despatches regulated by these instruments are indecipherable by any person unacquainted with the word that may have been selected for the base of the cypher alphabet; moreover, as long as the key-word remains undivulged, even the possession of the instrument employed, or of one similar to it, would not in the least assist one endeavouring to discover the translations.

This absolute secrecy, together with the fact that the use of the instrument can be acquired with the greatest facility, make the system in question well adapted for the transmission of orders between a general in chief and the generals of divisions during a campaign; also for the secret instructions sent from a minister at home to a general in command of an army in the field.

It is now more necessary to use cypher in the field than formerly, on account of the employment of the field telegraph for the transmission of orders, instead of relying solely on mounted officers. The field telegraphs would always, where they are established, be preferred on account of the time saved; the orders have, however, when sent by the wires, to pass through many hands, thus rendering secrecy most difficult of attainment. This drawback can only be obviated by the employment of cypher in all important cases.

The cypher employed during the Crimean campaign was a numerical cypher, formed on the principle of the cyphers employed in the Foreign Office. Cyphers of this kind are undiscoverable without the possession of the key or dictionary; this, though carefully guarded under lock and key, may, by chance, be obtained through treachery. The possibility of this occurring is an extreme disadvantge. Despatches based on the latter kind of cypher are suitable for transmission by hand or by the post; but they take a long time to transmit by the wire as compared with the rate of transmission of ordinary messages, because the combinations of numbers that represent each word have to be spelt throughout.

Instructions.

Formation of the Permutated Alphabet.

Choose any name or word, in which the same letter does not recur, as "France," "Carlton," "Palmerston."

Write down beneath it the omitted letters of the alphabet in their regular order, placing them in columns, thus:

C	*a*	*r*	*l*	*t*	*o*	*n*
b	*d*	*e*	*f*	*g*	*h*	*i*
j	*k*	*m*	*p*	*q*	*s*	*u*
v	*w*	*x*	*y*	*z*		

Then write the letters as they appear in the successive vertical columns, in a single row, thus:—

cbjvadkwremxlfpytgqzohsniu

The letters of the alphabet (divided) of the crytograph are then to be placed in the above order, round the inner ring; the initial letter C (in this case) being placed exactly below the blank of the permanent alphabet, occupying the outer ring.

It

* From κρύπτο (I hide.)

It is not, however, *necessary* to adopt a word in which the same letters do not recur. Any word whatever will answer the purpose by erasing the redundant letters. For example:—

S e b a s t o p o l
c d f g h i j k m n
q r u v w x y z

this gives

s c q e d r b f u a g v h w t i x o j y p k z m l n

If a different key-word be adopted for each correspondent, it will be impossible for any one of them to decipher a despatch addressed to another.

The cryptograph can be secured to a desk or table by means of the pins on the lower surface. As by these means it can be made perfectly steady, the hands can be worked by one hand. It will be found preferable to use the left hand for this purpose, as thereby the right hand is left free for writing.

Rendering a Despatch into Cypher.

At the commencement the long hand must correspond with the blank of the outer circle, and the short hand be directly under it.

The long hand must be brought successively to the letters of the despatch (outer circle), and the letters indicated on the inner circle by the short hand must be written down.

At the termination of each word the long hand must be brought to the blank, and the letter indicated by the short hand also written down. By this arrangement the cypher is continuous, no intimation be given of the separation of the words.

Whenever a double letter occurs, some unused letter, as for instance (q), must always be substituted for the repeated letter.

It will be best to divide a despatch into short sentences, and to commence each sentence with the instrument adjusted as at the beginning of the despatch. By this arrangement an error in one sentence cannot affect the other sentences.

The full stop at the end of each sentence should be represented by a dash, following the letter that is used to conceal the blank or termination of the last word.

To translate a Cypher Despatch back to the Original.

Make the long and the short hands coincide at the blank as before, and then by the movement of the long hand place the short hand opposite each of the letters of the cypher despatch in succession, writing down the letters indicated by the long hand.

The rule respecting the double letters is not to be observed in turning a cypher despatch back to the original. A slight error in copying the cypher can be retrieved in the translation by trying the letters beyond, omitting previously a turn, or adding an extra one, according to circumstances.

After using the instrument, if there be any occasion to make it impossible for persons about one to discover the key-word of the cypher, the letters of the cypher or inner circle should be removed. This can be effected by applying the ivory punch to the apertures at the back. The order of the cypher can be re-produced by remembering the key-word.

In cases where no fear of loss or abstraction of the instrument is apprehended, the card circles may be employed. The letters of the cypher must be written in their proper order in the divided spaces. Cyphers with different keys appropriated to each correspondent may be thus always kept in readiness, and one may be promptly substituted for another.

The chief circumstances which render this cypher so secure are these:

1. The same letter of the despatch is represented indifferently by any letter of the cypher.

2. No indication of the number of letters that there may be in any word is afforded.

3. There is no clue to the separation of the words, as the blank is itself represented indifferently by all the letters of the alphabet.

4. The changes in the signification of a letter depend on a *regular law*, the accessory hand making in some cases a complete revolution after one letter, and in others, after two, three, or more letters.

5. The permutations of the cypher alphabets are practically infinite.

Before dispatching a letter in cypher, the sender should translate the different sentences in order to ascertain that no mistakes exist.

In practice only, the most important parts of a despatch need be rendered into cypher.

The same instrument can be employed in corresponding with several persons; as the order of the letters in the cypher on the inner circle is capable of being changed in an almost infinite number of ways.

As the secret of the cypher is the particular order or succession of the letters, it is not necessary to keep the instrument under lock and key, provided that the cypher alphabet has been removed after use.

The following despatch of the Duke of Wellington, translated into a cypher constructed

Appendix, No. 2.

by means of this instrument, will afford an exercise both for translating into cypher and re-translating into ordinary language. The key-word is *France.* The dash indicates that the long and short hands of the cryptograph are both to be brought back to the blank, so that the following sentence may be translated without running on from the preceding.

Lieutenant General Viscount *Wellington*, K.B., to Lieutenant General *Hill.*

Sir, Arruda, 8 October 1810.

P Z L S P Q R E Q A J D I T F B U F Z O H Q O S U Q U D I K I T O R T W
E Z A C M T P L E R A U E S K G S O F G F D K H L S J I R K H F H M F A
D A Y I V U O H A O B L N O G R E J A I B K M P J Z T M J A B Q C N F P
O M Y H Y R C Z D C W B X U B Z——
Z B I L I J T E J Y S P F D L C X E T K Q A S O X O U N N O D Q
J C W E C L X P U Y I E M M C M S Y V C F P O K W C D E D V D
A G L P E E K N A G V K M N U U L S H X Y X Y V G F Q P U Y I O
R Q K L P T C Z H H K——
Z B K U P V S W Z W X A Q X D R E K T K Q A S O X O U I R S K
O M F S T I I X G W T Q J J V D Y F N A H L S I I X I A G Q L Z X
V O G N H G R B U O H Y Z O O P W V Y D D M Q J K F M O B J P
D Y V R B A W K G W S J I R J G I T O W T V E Z B H S O S L V U N
B C H Q S O T E I E B D Q M G W H G J A M I S X F I F B B P A V P
E S V C J U T A D——
P Z L P T Y V X Q X D T G L T T A F C V M H O M B I N J K W V Y
A Z O C Q L A I U K F E G F N C N F I Z H H K V Z Y Q U G L I V E N
K A H T R V F V E B W H W L R Y C M E X W S Y S Y J H U F S F P O K
E G Z R X L U B F T——

(signed) *Wellington.*

The Quarter* Master* General* sends* orders* to* Major* General* Fane* to* withdraw* the* Cavalry* under* his* command* to* Tojal* and* Loures*——*

I request* you* also* to* send* a* Brigade* of* six* pounders* to* Sobral* de* Monte* Agraca* to* join* the* Sixth* Division* I* also* request* you* to* send* from* Villa* Franca* the* nine* pounder* Brigade* to* Copua* de* Montecheque* where* it* is* to* remain* in* reserve* and* in* readiness* to* move* at* a* short* notice*——*

There must* be* a* Brigade* of* Infantry* for* the* occupation* of* the* lines* extending* from* the* high* road* to* the* Tagus.——*

Appendix, No. 3.

PAPERS handed in by Mr. *J. E. Taylor*, 7 July 1868.

(A).

MINUTES OF MEETING.

Appendix, No. 3.

AT a Meeting of Proprietors of Daily Provincial Papers, held on the 29th ult., at the United Hotel, Charles Street, Haymarket, London—

Present: Mr. J. E. Taylor, "Manchester Guardian," in the chair; Mr. F. D. Finlay, "Belfast Northern Whig"; Mr. Sebastian Evans, "Birmingham Daily Gazette"; Mr. J. Feeny, Jun., "Birmingham Daily Post"; Mr. P. S. Macliver, "Bristol Daily Press"; Mr. Thomas Crosbie, "Cork Examiner"; Mr. David A. Nagle, "Cork Daily Herald"; Sir John Gray, M.P., "Dublin Freeman's Journal"; Mr. J. W. Gray, "Dublin Freeman's Journal"; Mr. J. Robinson, "Dublin Daily Express"; Mr. Thomas Potts, "Dublin Saunders's News Letter"; Mr. — Coulter, "Dublin Saunders's News Letter"; Mr. H. Maunsell, "Dublin Evening Mail"; Mr. John Long, "Dundee Advertiser"; Mr. James Law, "Edinburgh Scotsman"; Mr. C. Wescomb, "Edinburgh Evening Courant"; Mr. J. H. Stoddart, "Glasgow Daily Herald"; Dr. Cameron, "Glasgow North British Daily Mail"; Mr. William Hunt, "Hull Eastern Morning News"; Mr. F. R. Spark, "Leeds Express"; Mr. Charles Tinling, "Liverpool Courier"; Mr. John Maitland "Liverpool Mercury"; Mr. John Sowler, "Manchester Courier"; Mr. Alexander Ireland, "Manchester Examiner and Times"; Mr. Jos. Cowen, "Newcastle Chronicle"; Mr. William Saunders, "Newcastle Northern Daily Express"; Mr. J. P. Latimer, "Plymouth Western Daily Mercury"; Mr. Edward Spender, "Plymouth Western Morning News"; Mr. F. Clifford, "Sheffield Daily Telegraph"; Mr. Robert Leader, "Sheffield Independent—

It was resolved:—

On the motion of Mr. *Saunders*, seconded by Mr. *Ireland*—

1. That the meeting accept the terms proposed as the maximum rates for special wires and press messages, but they strongly recommend that the proportionate number of words for day and night messages remain as at present—viz., 3 to 4, or 75 to 100, and they suggest that any 12 consecutive hours between 6 p.m. and 9 a.m. might be available for special wires.

On the motion of Mr. *Leng*, seconded by Mr. *Cowen*.

2. That a Co-operative Association of Proprietors of Provincial Newspapers be formed for the purpose of collecting and supplying news.

On the motion of Mr. *Taylor*, seconded by Mr. *Maitland*—

3. That all provincial newspaper proprietors who require telegraphic news be invited to join the Association, and that none but newspaper proprietors be allowed to become shareholders.

On the motion of Mr. *Spark*, seconded by Mr. *Leader*—

4. That the object of the association shall be to collect and supply—

Foreign Intelligence,	Commercial News,
Parliamentary Reports,	Sporting News,
General News,	

and such other news as the requirements of the members may demand.

Appendix No. 3.

On the motion of Mr. *Macliver*, seconded by Mr. *Sowler*—

5. That for this purpose a Company, with limited liability, be formed. The shares to be 30 *l.* each, 1 *l.* to be paid on application, and 9 *l.* as soon as it is necessary to commence active operations.

On the motion of Mr. *Law*, seconded by Mr. *Cowen*—

6. That the proprietors of each newspaper receiving intelligence from the Association, shall take one share for each day of the week on which they publish, and no more. Evening daily papers to take three shares only.

On the motion of Mr. *Spender*, seconded by Mr. *Evans*—

7. That the Association shall supply with news all shareholders' papers, of the same class, on equal terms, and as nearly as possible at cost price, but for use in the shareholders' paper only.

On the motion of Mr. *Leng*, seconded by Mr. *Ireland*—

8. That clubs, news-rooms, hotels, and private persons, may be supplied with news at rates of subscription to be from time to time determined.

On the motion of Mr. *Finlay*, seconded by Mr. *Maitland*—

9. That the Association be managed by a General Consultative Board, consisting of ten Members; a Committee of Management, consisting of four, who must also be Members of the General Board—both to be elected by the shareholders; and a manager, who shall be appointed by the Committee of Management.

On the motion of Mr. *Spender*, seconded by Mr. *Leng*—

10. That the Committee of Management be paid a sum not exceeding 500 *l.* for their services during the first year after the passing of the Act.

On the motion of Mr. *Hunt*, seconded by Mr. *Potts*—

11. That each shareholder shall have one vote at all meetings of the company which he attends for each share which he holds, and that no proxies be used at any of the company's meetings; no more than six votes being exercisable in respect of the proprietorship of one newspaper.

On the motion of Mr. *Spark*, seconded by Mr. *Saunders*—

12. That the share or shares held by any newspaper firm may be registered in the names of a number of persons, not exceeding three, who are proprietors of or are actually engaged in the conduct or management of the newspaper, at the place where it is printed and published; and any one of the three persons so registered may vote in respect of such share or shares if he be registered for six months. Provided always, that any original allottee or person registered in the first instance may vote at any meeting held within the first six months after the registration of the company.

On the Motion of Mr. *Leng*, seconded by Mr. *Law*—

13. That a committee be now appointed to make arrangements for the formation of the company, to prepare articles of association adapted to give effect to the resolutions passed at this meeting, and to meet the requirements of the business which it is intended to carry on, and that the following gentlemen constitute such committee:—Mr. J. E. Taylor, Dr. Cameron, Mr. W. Saunders, Mr. James Law, Sir John Gray, M.P., and Messrs. E. Baines, M.P., J. Jaffray, F. Clifford, J. Cowen, Jun., John Leng, F. D. Finlay, F. R. Spark, R. Leader, A. Ireland, and P. S. Macliver.

(B.)

PROVINCIAL NEWSPAPER SOCIETY (for Members only).

Dear Sir,

I HAVE received the following communication from the President:—

THE ANNUAL MEETING.

Dear Sir, Salisbury Hotel, 4 April 1868.

THE 4th Rule of the Provincial Newspaper Society provides that the annual meeting shall be held on "the Tuesday in the Derby week," unless some public occasion should arise for a different time of meeting, of which due notice shall be given by the Secretary on receiving directions from the President.

I have

I have consulted the Vice-Presidents whether the Handel Festival, which will be held from the 12th to the 19th June, is "a public occasion" within the meaning of the rule, and a majority have advised and approved of the change. I have seen Mr. Bowley thereon, and he recommends that we should not hold our meeting on the days of the performance at the Palace; and as Tuesday the 16th June, and Thursday the 18th will be vacant days, I shall thank you to give due notice to the Members according to the rule; that the Executive Council of the Society will meet at the Salisbury Hotel at Twelve o'clock, on Tuesday the 16th June, to prepare their report, &c. Any Member who chooses to dine with the Council at the hotel on that evening can do so, paying half-a-guinea. The annual meeting of the Society will be held at the Crystal Palace, on Thursday the 18th June, at Twelve o'clock, for the transaction of business, and the Members will dine together at four o'clock.

Mr. Bowley will reserve seats in the area for the Members of our Society, and if those who wish to enjoy that privilege will send their names to you, I shall be able to secure tickets for the Handel Festival for them. (Each Member will be allowed to bring a lady friend to each performance of the festival).

The manager of the Salisbury Hotel will give our Members the exclusive use of the reading room during that week, and breakfast and dinner will be served in it for those Members, whether they are staying in the hotel or not, who may wish to enjoy each others' company.

I hope these arrangements will be satisfactory to our Members, and tend to promote that mutual acquaintance and good fellowship which will enable us to develope the important interests which we enjoy in common.

I remain, &c.
(signed) *Joseph Fisher*, President.

W. E. Baxter, Esq., Hon. Sec.

THE TELEGRAPH BILL.

The Members will perceive by the following letter that this subject has not escaped attention:—

From the President of the P. N. S. to the Postmaster General.

Provincial Newspaper Society,
My Lord Duke, Waterford, 17 February 1868.

HAVING learned by the public papers that it is your intention to apply to Parliament for power to purchase the wires and plant of the telegraph companies,

The existing companies have made arrangements for the collection and transmission of news, which they supply to all the newspapers that subscribe therefor.

I will thank you to inform me whether it is your intention, on behalf of the Post Office, to continue the present system, or one analogous thereto, as there is some anxiety on the part of newspaper proprietors to learn how the intended change will affect them.

I am, &c.
(signed) *Joseph Fisher*, President P. N. S.

His Grace the Duke of Montrose,
Postmaster General.

From the Postmaster General to the President P. N. S.

General Post Office, London,
Sir, 20 February 1868.

IN reply to your letter of 17th instant, I beg leave to inform you that, in the event of Parliament giving its assent to the Bill about to be introduced for transferring to the Post Office the contract and management of the electric telegraphs throughout the United Kingdom, it is the intention of this department to make arrangements for the transmission of intelligence for the Press which, if not identical with those at present in force, shall be at least as satisfactory to the proprietors of newspapers.

I am, &c.
Joseph Fisher, Esq. (signed) *Frank Ives Scudamore.*

From the President of the P. N. S. to the Postmaster General.

Provincial Newspaper Society, Waterford,
My Lord Duke, 6 March 1868.

I HAVE to acknowledge the receipt of your letter of the 20th ultimo, No. 17,575, and to thank you for the information it contains.

Allow me to inquire whether it is your intention to continue the very objectionable system of competing with newspapers by supplying public rooms with the information collected for the use of the Press.

Appendix, No. 3.

The directors of the Electric Telegraph Company acknowledge that it a was a mistake to have attempted it. This competition, objectionable in a private company, would be obnoxious by a public department. The Press naturally expect that it shall not, in supplying news, be exposed to competition with a great department supported by the State.

I believe the newspapers, if not thus interfered with, will pay a larger sum for the intelligence than they can do where its value is destroyed by posting it in public rooms before it can be printed.

I am, &c.
(signed) *Joseph Fisher*, President P. N. S.

His Grace the Duke of Montrose,
Postmaster General.

Sir, General Post Office, 10 March 1868.

In reply to your further letter of the 6th instant, I beg leave to inform you that the question of the Post Office supplying public news rooms with telegraphic intelligence, in the event of the Bill about to be introduced into Parliament becoming law, has not yet been considered, and that, until the proposed measure is somewhat further advanced, it appears to the Postmaster General that it would be premature for this department to come to a decision on the subject.

When, however, the time arrives for the question to be decided, full consideration shall be given to the observations contained in your letter.

I am, &c.
Joseph Fisher, Esq., Waterford. (signed) *Frank Ives Scudamore.*

The Bill introduced by the Chancellor of the Exchequer, read the first time on Wednesday the 1st, is designed to produce "great advantage to the State, as well as merchants and traders, and to the public in general, by affording a cheaper, more widely extended, and more expeditious a system of telegraphy." It reduces the maximum price for private messages to 1 *s.* for 20 words. The President had an interview with Mr. Scudamore, at the Post Office, and he was then informed that it was intended to reduce the charge, and make the system more efficient. The Post Office will not collect news, and it will be necessary to provide some agency to discharge that function. Mr. Reuter is prepared to undertake to perform it, and the proprietors of daily provincial papers have met to consider what course they will pursue. Mr. Scudamore intends, when the Bill has got through the House of Commons, to invite the Press to appoint a delegation to meet him and arrange how the work is to be performed. He promises to give the newspapers all the aid in his power. This matter very seriously affects the Press, but it does not seem likely to be ripe for action until the annual meeting.

Appendix, No. 4.

PAPER handed in by Mr. *Scudamore*, 9 July 1868.

MAXIMUM and MINIMUM ESTIMATES of REVENUE, EXPENDITURE, and NET PROFIT, under POSTAL ADMINISTRATION of TELEGRAPH SYSTEM.

	Messages.	Messages.	
MAXIMUM ESTIMATE:			
arting point or business in inland messages taken over by Post Office on 1st July 1869, and arrived at by adding annual rate of ncrease, which is taken to be 10 per cent., to the number of nessages, 6,000,000, delivered in 1866	7,500,000		
the above starting number, 55 per cent., are at the 1 *s.* rate, and will be unaffected by reduction of rates - A.		4,125,000	
irty per cent. are at the 1 *s.* 6 *d.* rate, and will undergo a reduction of rate to the extent of 33 per cent. - B.		2,250,000	
n per cent. are at the 2 *s.* rate, and will be benefited by the reduction to the extent of 50 per cent. - C.		750,000	
nd 5 per cent. will be benefited by the reduction of rate to the extent of about 70 per cent. - D.		375,000	
		7,500,000	
r reasons given in evidence, it is assumed that Class A. will remain stationary -		4,125,000	
That Class B. will be increased by 80 per cent., and will rise to -		4,050,000	
That Class C. will be increased at the rate of 100 per cent., and will be raised to		1,500,000	
And that Class D. will be raised to the extent of 150 per cent., and will amount to		937,500	
ving an estimated total of messages, after reduction of rate, of -		10,612,500	
which is to be added, at the rate of 10 per cent., for increase of business caused by increased facilities		1,061,250	
		11,673,750	
	say	11,650,000	
is estimated number of messages, at a rate of 1 *s.* 2 *d.* per single message (the 2 *d.* being added as representing the charge for excess of words) gives -	£	680,000	£. Maximum Revenue, say 680,000
EXPENDITURE:			
he starting point of expenditure is taken to be the combined expenditure of the Telegraph Companies, namely -		£. 330,000	
om this is to be deducted for the saving which they could effect if they amalgamated		55,000	
		275,000	
rom it also must be deducted the cost of working and maintaining Reuter's cable and the cables of the Electric Company, which will no longer devolve on us -		10,000	
		265,000	
o this must be added for the cost of working and maintaining Post Office extensions, 10 per cent. -		26,500	
nd there must also be added for the cost of meeting the estimated increase of business, 33 per cent. -		87,450	
This will give a total estimated expenditure of -			378,950
And will leave the net revenue -			301,050
To which we must add for Press messages -			12,000
And for continental messages -			45,000
		Leaving	358,050
Say, a TOTAL NET REVENUE - £.			358,000

Appendix, No. 4.

Minimum Estimates.

	Messages.	£.
Business at starting, as before, viz.	7,500,000	
Which, if they do not increase at all under Post Office management, will produce at 1 *s.* 2 *d.* per message	£.	437,500
Expenditure at starting point as before	330,000	
Less for saving, which companies could effect by amalgamation	55,000	
	275,000	
Less also for cost no longer incurred of working Reuter's cable, and working and maintaining cables to Holland	10,000	
	265,000	
Add for working Post Office extensions	26,500	
Making a total of		291,500
To which, as we take nothing for increase of business, we need add nothing	—	—
There will then be a minimum net revenue of		146,000
To which we add as before for Press news		12,000
And for continental messages		45,000
Being in all	£.	203,000

	£.
Net Revenue under Maximum Estimate	358,000
Net Revenue under Minimum Estimate	203,000
	£. 561,000
Mean Net Revenue under both Estimates	£. 280,500

Appendix, No. 5.

PAPERS handed in by Mr. *Bright*.

BRITISH AND IRISH MAGNETIC TELEGRAPH COMPANY.

Appendix, No. 5.

COMPARATIVE RETURN.

Revenue and Working Charges.

	1867.	1866.	1865.
	£. s. d.	£. s. d.	£. s. d.
Gross Receipts	146,637 15 11	137,243 11 6	128,177 – 2
Revenue Charges:			
Maintenance of lines and instruments	24,910 7 9	25,210 9 2	24,946 16 –
Salaries and wages (Commercial department)	36,245 12 6	33,498 12 3	31,383 11 –
Petty expenses at stations	2,538 14 7	2,403 5 6	2,179 17 6
Rents and rates	12,640 – 2	12,490 15 7	12,101 5 9
Stationery and printing	4,147 11 5	4,078 6 –	4,233 11 6
Clothing and liveries, &c.	954 8 3	882 6 5	756 4 6
Repairs: stations and offices	700 6 1	758 9 8	955 10 8
Newspapers and news reports	1,538 7 –	1,424 12 1	1,438 4 6
Insurance, postage, and miscellaneous	1,134 17 2	1,722 2 7	1,283 13 2
Law charges	239 8 8	166 5 2	323 10 11
Travelling expenses	431 8 9	415 13 8	450 15 9
Direction	1,050 – –	1,050 – –	1,050 – –
Audit	100 – –	100 – –	100 – –
Ordinary working charges	86,631 2 4	84,200 18 1	81,203 1 3
Repair of Cables	2,674 – 10	1,050 1 3	1,456 7 4
Total Revenue Expenditure	89,305 3 2	85,250 19 4	82,659 8 7
Balance	57,332 12 9	51,992 12 2	45,517 11 7
£.	146,637 15 11	137,243 11 6	128,177 – 2

BRITISH AND IRISH MAGNETIC TELEGRAPH COMPANY.

RETURN.

	1865.	1866.	1867.
	£. s. d.	£. s. d.	£. s. d.
Maintenance, posts and wires	21,221 5 7	21,490 4 1	21,588 6 9
Ditto - instruments and apparatus	3,725 10 5	3,720 5 1	3,322 1 –
£.	24,946 16 –	25,210 9 2	24,910 7 9

Appendix, No. 5.

Appendix, No. 5.

AGREEMENTS

BETWEEN

HER MAJESTY'S POSTMASTER GENERAL

AND

RAILWAY AND TELEGRAPH COMPANIES.

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No. 1.

AGREEMENT made this Ninth day of July One Thousand Eight Hundred and Sixty-Eight between HER MAJESTY'S POSTMASTER GENERAL of the one part and THE GREAT WESTERN RAILWAY COMPANY (hereinafter called "The Railway Company") of the other part.

First. This Agreement to extend to all the railways and canals of the Railway Company which are embraced in the Agreements specified in the Schedule hereto.

Second. The Railway Company may at any time or times hereafter require the Postmaster General to extend and he shall thereupon extend the provisions of this Agreement to and so as to include any present or future lines leased or worked by them if they make arrangements to that effect with the owners of those lines and the Railway Company may also require the Postmaster-General to extend and he shall thereupon extend the provisions of this Agreement to and so as to include any lines leased or worked by them jointly with any other Railway Company if they make arrangements with such Company to that effect but subject to any Agreements theretofore made between the owners of such lines and the Postmaster General.

Third. The Postmaster General shall give to the Railway Company three months' notice before he acquires the undertakings of any of the Telegraph Companies with which the Railway Company have Agreements and on the expiration of such notice all the Agreements and also all the contracts now existing between the Railway Company and the Electric and International Telegraph Company and which are specified in the Schedule annexed hereto shall cease and determine.

Fourth. On such acquisition the Telegraph wires poles cables instruments and other telegraphic apparatus belonging to the Railway Company shall remain the property of the Railway Company and be subject to their control absolutely and the Railway Company shall be entitled to increase alter and extend to such extent as they may deem necessary their existing Telegraph system wires poles and apparatus and to use such additional or other wires poles or apparatus from time to time as they may think proper but subject as hereinafter provided for.

Fifth. On such acquisition as aforesaid all the poles wires instruments and other telegraphic apparatus cables and appurtenances belonging to the Telegraph Company on the Railway Company's lines or on the lines worked by them which are then employed either wholly or partly in connection with the Railway Company's Telegraph work shall become the absolute property of the Railway Company and shall be handed over to them by the Postmaster General free of charge in efficient working order so that the Railway Company may be in a position at once to take up and carry on their own Telegraph work on their own system and thereafter the maintenance and working of the said poles wires instruments and other telegraphic apparatus shall except as hereinafter provided be at the charge of the Railway Company.

Sixth. The poles and wires if any which are now exclusively used by the Electric and International Telegraph Company for the purposes of public messages shall from and after such acquisition as aforesaid so far as the Railway Company is concerned become the property of the Postmaster General.

Seventh. On such acquisition as aforesaid the Postmaster General shall be entitled to use from Telegraph stations not on the lines of railway all the wires belonging to the Telegraph Company on the lines embraced in the Agreement specified in the Schedule and employed exclusively in the transmission of the public Telegraph business which are erected on the poles to be handed over to the Railway Company under this Agreement and he shall also be entitled to call upon the Railway Company to erect and maintain at his cost additional wires on said poles provided they are sufficiently strong and high for the purpose and also to erect new poles at places to be agreed upon with wires over any of the lines and canals of the Railway Company specified in the said Agreements but so that such new poles shall not interfere in any way with the convenience or working of the Railways or Canals of the Railway Company or obstruct the working of the traffic thereon The Railway Company shall maintain all the poles and wires used for public messages the Postmaster General paying for the same as may be agreed or settled by arbitration.

Eighth. The Postmaster General shall have the right to require the Railway Company to affix at the cost of the Government additional wires to the poles to be handed over to the Railway Company under this Agreement provided they are sufficiently strong and high for the purpose and the Railway Company shall have power to affix wires to the poles belonging to the Postmaster General provided they are sufficiently strong and high for the purpose and the cost of the maintenance and renewal of such poles of the Railway Company and the Postmaster General shall be borne and paid by the Postmaster

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General and the Railway Company in proportion to the number of wires belonging to each respectively on each pole.

Ninth. The Railway Company may shift the poles wires and apparatus belonging to the Postmaster General when necessary for the purposes of their works or traffic but in all such cases the Postmaster General shall pay to the Railway Company the actual costs incurred in shifting such poles and apparatus but if such poles support the wires of the Railway Company and of the Postmaster General the cost of shifting the same shall be apportioned according to the number of wires belonging to or respectively used by the Railway Company and the Postmaster General.

Tenth. The Postmaster General shall pay the Railway Company the following sums by way of compensation:—

First. Twenty years' purchase of the amount of their net annual profits in respect of public Telegraph messages received and forwarded over the wires belonging to or rented by the Railway Company reckoned on the basis of the profits derived therefrom for the year ending the thirtieth day of June one thousand eight hundred and sixty-eight:

Second. Twenty times the amount of the estimated average annual increase of said receipts from telegraphic messages including new lines and new stations on existing lines such annual amount in case of difference to be settled by arbitration:

Third. All rents and annual or other payments payable to the Railway Company by public Telegraph Companies during the still unexpired periods embraced in their respective Agreements and at the terms mentioned in said Agreements respectively:

Fourth. Such sums as shall be agreed upon or in default of Agreement as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of granting other way-leaves and making future arrangements with Telegraph or other Companies and of granting a monopoly to the Postmaster-General for the conveyance of Telegraphs over their Railways as herein provided for:

Fifth. Such sums as shall be agreed upon or in default of Agreement as shall be settled by arbitration as the value of the Railway Company's reversionary interest in the Telegraph receipts from public messages on certain sections of their line on the expiration of the Agreements with the Telegraph Company specified in the Schedule hereto and in determining the sums payable to the Railway Company under this Agreement the arbitrators or umpire shall have regard and take into view the results of the experience of the Railway Company and the Telegraph Companies in working the Telegraphs for the public on such portions of their line as they have so worked Provided that in determining the sums payable to the Railway Company under section five of this Agreement the arbitrators or umpire shall have regard to and take into view the sums payable to the Company under section four so as that in no case shall the Railway Company receive double payment in respect of one and the same subject-matter:

Sixth. Such sums as shall be agreed upon or in default of Agreement as shall be settled by arbitration for any clerks now provided by the Telegraph Company and for any extra cost which the Railway Company may incur in working their Telegraph for Railway purposes as a separate system:

Seventh. The Postmaster-General shall transmit free of charge to their respective destinations in the United Kingdom all messages of the Railway Company bonâ fide relating to the business of the Railway Company:

Eighth. On such acquisition as aforesaid the Postmaster General shall as herein provided have a perpetual right of way for his poles and wires over the whole of the Railway Company's system included in the Agreements specified in the Schedule hereto and in consideration thereof he shall pay to the Railway Company such sum per mile per wire over the whole of the said system by way of yearly rent as shall be determined by Agreement between the parties or failing Agreement as shall be fixed by arbitration and the arbitrator in determining the amount to be paid to the Railway Company shall have regard to a compulsory sale being required from the Railway Company and shall also during the period of existing Agreements have regard to the Agreements which are contained in the Schedule hereto.

Eleventh. The Railway Company shall if required by the Postmaster General at any station where they may employ a Telegraph clerk or where it may be agreed upon from time to time between the Railway Company and the Postmaster General and where the Postmaster General shall have provided a Telegraph instrument or instruments in connection with the Telegraph wires of the Post Office during the time such Telegraph office is open for railway purposes or during such hours as may be agreed upon receive messages for transmission by Telegraph from the public and shall at the Postmaster General's sole risk and expense transmit the same either to their place of destination if upon the Railway Company's lines or to some convenient Post Office as shall be arranged and in respect of such receipt and transmission the Railway Company shall act as agents

of

of the Postmaster-General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Twelfth. The Railway Company may by arrangement with the Postmaster-General receive messages from the public for transmission by the Railway Company's wires subject however in all cases to priority for the messages of the Railway Company such public messages being transmitted at the Postmaster-General's sole risk and expense either to their place of destination if upon the Railway Company's lines or to some convenient Post Office as shall be arranged and in respect of such receipt and transmission the Railway Company shall act as agents of the Postmaster-General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Thirteenth. The Railway Company may without payment to the Postmaster-General from time to time make arrangements with any Company or person for the erection and working of private Telegraphs along their line, but such Telegraphs shall be used only for the transmission of messages on the private business of such Company or person or on business between such Company or person and the Railway Company and no money payment shall be received by the Railway Company in respect thereof except by way of annual rent or payment.

Fourteenth. Except as aforesaid the Railway Company shall not transmit or permit the transmission of any telegraphic message through their wires for the time being.

Fifteenth. The Railway Company shall renew erect and maintain all wires and poles upon the Railway and the Postmaster-General shall for the renewal erection and maintenance of those erected for him or on his request including the conveyance of materials stores and workmen to be used or employed for such purposes and for the accommodation to be afforded pay such sums as shall be agreed upon or in case of difference as shall be settled by arbitration but no additional system of poles for carrying new wires shall be erected till the existing poles are found insufficient nor shall any poles or wires be removed or abandoned by the Postmaster-General without the consent of the Railway Company or failing such consent unless an arbitrator shall otherwise determine.

Sixteenth. The Postmaster-General shall provide all telegraphic instruments batteries stationery and other appliances apparatus and appurtenances required for the purposes of the Government and the messages of the public at the stations of the Railway Company and the Railway Company shall maintain such instruments and apparatus on such terms and conditions as may be agreed upon or failing Agreement as may be settled by arbitration in the manner hereinafter provided.

Seventeenth. In the event of the Railway Company or of the Postmaster-General requiring any further arrangements facilities or accommodation from each other with respect to any of the matters herein referred to the same shall be provided for by Agreement between the parties hereto.

Eighteenth. The Postmaster General and the Railway Company may from time to time agree with each other as to the commutation or partial commutation for a fixed sum or sums of any payment or payments to be made by him to the Railway Company under this Agreement.

Nineteenth. All work done and duties performed by the Railway Company for the Postmaster-General under the provisions of this Agreement shall be done and performed by them in a business-like manner but at the sole risk of the Postmaster-General and all work to be done and duties performed by the Railway Company and all conveniences accommodation and facilities to be afforded to the Postmaster-General under the provisions of this Agreement shall so far as concerns the Postmaster-General be for or in relation to the purposes of telegraphic communication.

Twentieth. All matters of difference between the Postmaster-General and the Railway Company under this Agreement shall be settled by arbitration in conformity with the provisions of the Railway Companies' Arbitration Act 1859.

Twenty-first. This Agreement will be void unless the Electric Telegraph Bill now before Parliament becomes law in this Session of Parliament.

In witness whereof the Postmaster-General hath hereunto set his hand and seal and the Great Western Railway Company hath caused their common seal to be affixed the day and year first above written.

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SCHEDULE referred to in this AGREEMENT.

1. Agreement between the Electric Telegraph Company and the Great Western Railway Company *ré* Telegraphs on Great Western Railway proper dated - - - - - - - - - - -	14th March 1855.
2. Agreement endorsed on the above Agreement *ré* Telegraphs on Shrewsbury and Birmingham and Shrewsbury and Chester Railways dated - - - - - - - - - - - -	29th April 1858.
3. Agreement also endorsed on the Agreement first above referred to *ré* Telegraphs on the Hereford Ross and Gloucester Railway dated - - - - - - - - - - - - -	29th April 1858.
4. Agreement between the above Companies as to services to be performed by the one Company's servants for the other and for among other things payment of £.650 annually by the Telegraph Company to the Railway Company for the use of the wires appropriated to the Railway Company dated - - - - - - -	30th June 1860.
5. Contract between the Electric Telegraph Company and the Oxford Worcester and Wolverhampton Railway Company *ré* Telegraph on the Oxford Worcester and Wolverhampton Railway dated - -	1st July 1853.
6. Contract between the Electric Telegraph Company and the Newport Abergavenny and Hereford Railway Company *ré* Telegraph on the Newport Abergavenny and Hereford Railway dated - - - -	1st August 1859.
7. Agreement between the Electric Telegraph Company and the West Midland Railway Company *ré* Telegraph on the Worcester and Hereford and Severn Valley Lines and on the Honeybourne and Stratford Branch dated - - - - - - - -	25th October 1861.
8. Agreement between the Electric Telegraph Company and the South Wales Railway Company *ré* Telegraph on the South Wales Railway dated - - - - - - - - - - - - -	31st December 1855.
9. Agreement between the Electric Telegraph Company and the Vale of Neath Railway Company *ré* Telegraph on the Vale of Neath Railway dated - - - - - - - - - - - -	13th December 1855.
10. Agreement between the Electric Telegraph Company and the Great Western Railway Company *ré* Telegraph from the Pontypool Road Station to Newport dated - - - - - - - - - -	1st October 1864.

No. 2.

HEADS OF AGREEMENT made this Tenth day of July One Thousand Eight Hundred and Sixty-Eight between HER MAJESTY'S POSTMASTER-GENERAL and the LONDON AND SOUTH WESTERN RAILWAY COMPANY hereinafter called the "Railway Company."

On or within six months after the acquisition by the Postmaster-General of the undertaking of the Electric and International Telegraph Company (hereinafter called the Telegraph Company) the Agreement subsisting between the Telegraph Company and the Railway Company shall at the request of the Railway Company in writing to the Postmaster-General determine and thereupon the provisions hereinafter contained shall take effect in lieu of the Agreement so determined.

First. The Admiralty Telegraphic wire communication shall belong to the Postmaster-General and the Railway Company in equal shares and during the term for which the Admiralty Commissioners pay an annual rental for such Telegraphic wire communication one half of such rental shall belong to the Postmaster-General and the other half to the Railway Company.

Second. The Telegraph poles wires instruments and other apparatus belonging to the Railway Company and also all poles wires instruments and other apparatus belonging to the Telegraph Company on the Railway Company's lines or on lines leased to or worked by or under the management of the Railway Company necessary for establishing a complete system of telegraphy (and which shall be held to consist at the least of a double wire system of Electric Telegraphs including all necessary apparatus whatsoever) in addition to all local Telegraph circuits and apparatus and all poles wires instruments and apparatus used for working the block system or in connection therewith or in relation to Railway signalling arrangements on their lines of Railway or on lines leased to or worked by them or under their management shall become and remain the absolute property of the Railway Company for their sole and exclusive use and under their sole and absolute control and shall be handed over to them by the Postmaster-General free of charge in efficient working order so that the Railway Company may be in a position at once to take up and carry on their own telegraphic work on their system and thereafter the maintaining and working of such poles wires instruments and other apparatus shall be done solely by the Railway Company.

Third. The Railway Company shall be entitled to increase diminish alter or extend as they may deem necessary their existing poles wires instruments and apparatus and to use such additional poles wires and apparatus for the purpose of receiving and transmitting messages in any way relating to the traffic or business of the Railway Company but not otherwise.

Fourth. The Railway Company's Telegraphic system as expressed or intended to be expressed in Articles 2 and 3 to be worked solely and exclusively by the Railway Company and that system is not to be extended beyond the Railway stations or to be otherwise interfered with in any manner without the written consent of the Railway Company but public messages may by arrangement between the Company and the Postmaster-General be transmitted to or from Railway stations through the Railway Company's wires by the Railway Company's staff the Railway Company receiving in respect thereof such remuneration from the Postmaster-General as shall from time to time be agreed upon Provided always that messages on the business of the Railway Company or in connection therewith shall have the right of priority.

Fifth. The Postmaster-General to have a way-leave for his poles and wires over the lines belonging or leased to or worked by the Railway Company and the wires and poles (if any) thereon now the property of the Telegraph Company and exclusively used for public messages (but not including those used for Admiralty purposes) to become the property of the Postmaster-General such way-leave to be perpetual in respect of Railways which are the property of the Railway Company and for the longest term which the Railway Company can grant in respect of Railways not their property but leased to or worked by them.

Sixth. The Postmaster-General to have the right of requiring that at his cost wires shall be fixed to existing Telegraph poles provided they are sufficiently strong and high for the purpose and also the right to require the erection at his cost of new poles and wires on any portions of the Railway Companies' lines but so that such new poles and wires shall not interfere in any way with the convenience and working of the Railways or the Telegraphs of the Railway Company or obstruct or endanger the working of the traffic on the Railways.

The Railway Company may at their own expense affix for Railway purposes or for purposes referred to in this arrangement additional wires upon any poles erected for the Postmaster-General.

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Seventh. The Railway Company to erect for the Postmaster-General the poles and wires mentioned in Article 6 and to maintain for the Postmaster-General the wires mentioned in Article 5 and also the poles and wires mentioned in Article 6 so far as the same may be on the line of Railway and the Postmaster-General to pay the Railway Company for such erection and maintenance as may be agreed upon or settled by arbitration but the terms shall in no case be less than the actual cost price of labour materials and superintendence in and about the construction and maintenance thereof including the conveyance of materials stores and workmen used or employed for such purposes Provided also that the Railway Company shall have the power to shift the poles wires and apparatus belonging to the Postmaster-General as often as they may consider it necessary for the purposes of their works or traffic at the cost of the Postmaster-General if such poles wires or apparatus be used by him only or if jointly used for public and Railway purposes the cost of shifting shall be borne in proportion to the number of wires respectively used for Railway and public purposes.

Eighth. All batteries instruments and other apparatus and appurtenances stationery and appliances required for the purposes of public messages in connection with wires and used exclusively for that purpose at the Railway stations shall be supplied and provided by the Postmaster-General and the batteries instruments and other apparatus shall be maintained by the Railway Company at his expense.

Ninth. All public messages sent to or from the stations on the Railways by wires exclusively used for public messages shall be transmitted to or from such stations and within such hours as may be agreed upon by the Railway Company as agents for the Postmaster General and at his sole risk and expense either to their place of destination if upon the Company's lines or to some convenient Post Office as may be arranged and in respect of the receipt and transmission of such public messages the Company shall act as agents for the Postmaster-General and shall receive in respect thereof such remuneration as shall from time to time be agreed upon or in case of difference as shall from time to time be settled by arbitration.

Tenth. In receiving and transmitting messages the officers and servants of the Railway Company shall do so in subordination to and so as not to interfere in any way with the due performance of their usual and ordinary Railway duties and the Railway Company their officers and servants shall not incur any responsibility whatever in so receiving and transmitting messages or in connection therewith and all moneys if any received by the Railway Company or any of their officers or servants for the transmission of any message shall be paid over to the Postmaster-General.

Eleventh. Messages of and for the Railway Company relating to their own business or to the bnsiness of the Railways from time to time belonging or leased to them or worked by them or under their management or to the traffic thereon shall be transmitted by the Postmaster-General to their respective destinations from or to any Telegraph station for the time being on the Railways and also to or from any other Telegraph station for the time being in the United Kingdom free of charge.

Twelfth. The Railway Company may notwithstanding this Agreement and without payment to the Postmaster General from time to time make arrangements by way-leave or otherwise with Government light-house dock or harbour commissioners shipping or other companies and also with traders generally upon the Railway system or with any other parties for the erection maintenance and working of private Telegraphs but such Telegraphs shall not be used for public purposes and only for telegrams between those parties and their correspondents and servants or for business in connection with the Railway.

Thirteenth. The payment to be made by the Postmaster-General for the way-leave for telegraphic purposes over the lines of the Railway Company under the provisions of this Agreement shall be such sum per mile per wire over the whole Railway system of the Railway Company by way of yearly rent as shall from time to time be determined by Agreement between the parties or failing Agreement as shall from time to time be fixed by arbitration. The arbitrator to have regard to the terms and conditions of the now existing Agreement between the Railway Company and the Telegraph Company to the capital expended on the Telegraph system by the Railway Company and to its altered position in respect of that Telegraph system generally and such way-leave and the rights of the Postmaster-General under this Agreement are to be regarded by the arbitrator as of the nature of a compulsory sale or transfer by the Railway Company.

Fourteenth. The Postmaster-General shall pay the Railway Company such compensation as shall be agreed upon or failing agreement as shall be settled by arbitration in respect of the following matters viz. in respect of the loss which the Railway Company will or may sustain by or in respect of

A. The maintenance and renewal by the Railway Company at their expense of the Admiralty Telegraphic wire communication which under the subsisting Agreement is a liability of the Telegraph Company.

B. The difference between the cost of construction by the Railway Company at their

their expense and the cost of construction for them by the Telegraph Company at actual cost price of any new Telegraphs or apparatus or additions to alterations in or extensions of any existing or future Telegraphs of the Railway Company or the apparatus belonging thereto and which the Telegraph Company under the subsisting Agreement are bound to execute for the Railway Company at actual cost price to the Telegraph Company.

C. The maintenance and renewal by the Railway Company at their expense of the Railway Telegraphs together with all requisite poles wires batteries and other apparatus and of all necessary battery power with zinc and acids and other requisite materials for working the said Railway Telegraphs all which under the subsisting Agreement is a liability of the Telegraph Company subject to the payments by the Railway Company mentioned in Articles 18 and 19 of the subsisting Agreement.

D. The ceasing of any payments now made by the Telegraph Company to or in relief of the Railway Company in the shape of payments to clerks now provided by the Telegraph Company or otherwise and for any extra cost which the Railway Company may incur in working their Telegraph for Railway purposes as a separate system.

E. The loss caused to the Railway Company by the cessation of the rentals for office or other accommodation now paid by the Telegraph Company.

F. The loss caused to the Railway Company by the granting of a monopoly to the Postmaster-General for the conveyance of Telegraphs over their Railways and by the preventing of grants by the Railway Company of other way-leaves and the making by them of arrangements with other Telegraph Companies and by preventing the Railway Company receiving and transmitting of public messages on certain sections of the Railway and for the value if any of the Railway Company's reversionary rights on the expiry of their existing Agreement with the Telegraph Company.

And in determining the sums payable under paragraph F to the Railway Company the arbitrators or umpire shall have regard to and take into view the estimated increase of rents or way-leaves and of revenue from public messages to be inferred from the experience of the Telegraph Company in working Telegraphs for the public and otherwise and in determining all other sums under Article 14 he shall have regard to the terms and conditions of the now existing Agreement.

Fifteenth. All questions by this Agreement referred to arbitration shall be determined by arbitration in accordance with the Railway Companies' Arbitration Act 1859.

Sixteenth. This Agreement to be void unless the Electric Telegraphs Bill now before Parliament becomes law in this Session of Parliament.

No. 3.

HEADS of AGREEMENT made this Ninth day of July One Thousand Eight Hundred and Sixty-eight between HER MAJESTY'S POSTMASTER-GENERAL of the one part and The LONDON CHATHAM and DOVER RAILWAY COMPANY (hereinafter called "the Company") of the other part.

First. This Agreement to extend to all the Railways of the Company.

Second. The Company may at any time or times hereafter require the Postmaster-General to extend and he shall thereupon extend the provisions of this Agreement to and so as to include any present or future lines owned leased or worked by them if they make arrangements to that effect with the owners and lessees of those lines and the Company may also require the Postmaster-General to extend and he shall thereupon extend the provisions of this Agreement to and so as to include any lines leased or worked by them jointly with any other Railway Company if they make arrangements with such Company to that effect but subject to any Agreements theretofore made between the owners of such lines and the Postmaster-General.

Third. The Postmaster-General shall give to the Company three months' notice before he acquires the undertakings of any of the Telegraph Companies with which the Company have Agreements and on the expiration of such notice all the Agreements and also all the contracts now exisiting between the Company and the Telegraph Companies and which are specified in the Schedule annexed hereto shall cease and determine.

Fourth. On such acquisition the Telegraph wires poles cables instruments and other telegraphic apparatus belonging to the Company shall remain the property of the Company and be subject to their control absolutely and the Company shall be entitled to increase alter and extend when and to such extent as they may deem necessary their existing tele-

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graph system wires poles and apparatus and to use such additional or other wires poles or apparatus from time to time as they may think proper but subject as hereinafter provided for.

Fifth. On such acquisition as aforesaid all the poles wires instruments and other Telegraphic apparatus cables and appurtenances belonging to any Telegraph Company on the Company's lines or on the lines worked by them which are then employed either wholly or partly in connection with the Company's Telegraph work shall become the absolute property of the Company and shall be handed over to them by the Postmaster-General free of charge in efficient working order so that the Company may be in a position at once to take up and carry on their own Telegraph work on their own system and thereafter the maintenance and working of the said poles wires instruments and other Telegraphic apparatus shall except as hereinafter provided be at the charge of the Company.

Sixth. The poles and wires if any which are now exclusively used by the Telegraph Companies for the purposes of public messages shall from and after such acquisition as aforesaid so far as the Company is concerned become the property of the Postmaster-General.

Seventh. On such acquisition as aforesaid the Postmaster-General shall be entitled to use from Telegraph stations not on the lines of Railway all the wires belonging to the Telegraph Companies on the lines of the Company employed exclusively in the transmission of the public Telegraph business which are erected on the poles to be handed over to the Company under this Agreement and he at his cost shall also be entitled to call upon the Company to erect and maintain additional wires on the said poles provided they are sufficiently strong and high for the purpose and also to call upon the Company to erect at his cost such new poles at places to be agreed upon with wires over any of the lines of the Company but so that such new poles and wires shall not interfere in any way with the convenience or working of the Railways of the Company or obstruct the working of the traffic thereon. The Company shall maintain all the poles and wires used for public messages the Postmaster General paying for the same as may be agreed or settled by arbitration.

Eighth. The Postmaster General shall have the right to require the Railway Company to affix at his cost additional wires to the poles to be handed over to the Company under this Agreement provided they are sufficiently strong and high for the purpose and the Company shall have power to affix wires to the poles belonging to the Postmaster General provided they are sufficiently strong and high for the purpose and the cost of the maintenance and renewal of such poles of the Company and the Postmaster General shall be borne and paid by the Postmaster General and the Company in proportion to the number of wires belonging to each respectively on each pole.

Ninth. The Company may shift the poles wires and apparatus belonging to the Postmaster-General when necessary for the purposes of their works or traffic but in all such cases the Postmaster-General shall pay to the Company the actual costs incurred in shifting such poles and apparatus but if such poles support the wires of the Company and of the Postmaster-General the cost of shifting the same shall be apportioned according to the number of wires belonging to or respectively used by the Company and the Postmaster-General.

Tenth. The Postmaster-General shall pay the Company the following sums by way of compensation:—

First. Twenty years' purchase of the amount of the net annual profits of public Telegraph messages received and forwarded over the wires belonging to or rented by the Railway Company reckoned on the basis of the receipts of the year ending thirtieth of June one thousand eight hundred and sixty-eight.

Second. The total amount of the estimated progressive annual increase over twenty years of the net receipts for Telegraphic messages such annual increase to be based upon the increase of the gross receipts for the year ending thirtieth of June one thousand eight hundred and sixty-eight over the gross receipts for the year ending thirtieth of June one thousand eight hundred and sixty-seven.

Third. All rents and annual payments payable to the Company by Telegraph Companies during the still unexpired periods embraced in their respective Agreements and at the terms mentioned in said Agreements respectively.

Fourth. Such sums as shall be agreed upon or in default of Agreement as shall be settled by arbitration in respect of the loss by the Company of the privilege of granting other way leaves and making future arrangements with Telegraph or other Companies and of granting a monopoly to the Postmaster-General for the conveyance of Telegraphs over their Railways as herein provided for.

Fifth. Such sums as shall be agreed upon or in default of Agreement as shall be settled by arbitration for any clerks now provided by the Telegraph Companies and for any extra cost which the Company may incur in working their Telegraph for Railway purposes as a separate system.

Sixth. The Postmaster-General shall transmit free of charge to their respective destinations

destinations in the United Kingdom all messages of the Company bonâ fide relating to the business of the Company.

Seventh. On such acquisition as aforesaid the Postmaster-General shall as herein provided have a perpetual right of way for his poles and wires over the whole of the Company's system and in consideration thereof he shall pay to the Railway Company such sum per mile per wire over the whole of the said system by way of yearly rent as shall be determined by agreement between the parties or failing agreement as shall be fixed by arbitration and the arbitrator in determining the amount to be paid to the Company during the period of existing Agreements shall have regard to the Agreements which are contained in the Schedule hereto and also to a compulsory sale being required from the Company.

Eleventh. The Company shall if required by the Postmaster-General at any station where they may employ a Telegraph clerk or where it may be agreed upon from time to time between the Company and the Postmaster-General and where the Postmaster-General shall have provided a Telegraph instrument or instruments in connection with the Telegraph wires of the Post Office during the time such Telegraph office is open for Railway purposes or during such hours as may be agreed upon receive messages for transmission by Telegraph from the public and shall at the Postmaster-General's sole risk and expense transmit the same either to their place of destination if upon the Company's lines or to some convenient Post Office or otherwise as shall be arranged and in respect of such receipt and transmission the Company shall act as agents of the Postmaster-General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Twelfth. The Company may by arrangement with the Postmaster-General receive messages from the public for transmission by the Company's wires subject however in all cases to priority for the messages of the Company such public messages being transmitted at the Postmaster-General's sole risk and expense either to their place of destination if upon the Company's lines or to some convenient post-office or otherwise as shall be arranged and in respect of such receipt and transmission the Company shall act as agents of the Postmaster-General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Thirteenth. The Company may without payment to the Postmaster-General from time to time make arrangements with any Company or person for the erection and working of private Telegraphs along their line but such Telegraphs shall be used only for the transmission of messages on the private business of such Company or person or on business between such Company or person and the Company and no money payment shall be received by the Company in respect thereof except by way of annual rent or payment.

Fourteenth. Except as aforesaid the Railway Company shall not for hire pay or profit transmit or permit the transmission of any Telegraphic message through their wires for the time being.

Fifteenth. The Railway Company shall renew erect and maintain all wires and poles upon the Railway and the Postmaster-General shall for the renewal erection and maintenance of those erected for him or on his request including the conveyance of materials stores and workmen to be used or employed for such purposes and for the accommodation to be afforded pay such sums as shall be agreed upon or in case of difference as shall be settled by arbitration but no additional system of poles for carrying new wires shall be erected till the existing poles are found insufficient nor shall any poles or wires be removed or abandoned by the Postmaster-General without the consent of the Railway Company or failing such consent unless an arbitrator shall otherwise determine.

Sixteenth. The Postmaster-General shall provide such further Telegraphic instruments batteries stationery and other appliances apparatus and appurtenances as may be required for the purposes of the Government and the messages of the public at the stations of the Company and the Company shall maintain such instruments and apparatus on such terms and conditions as may be agreed upon or failing agreement as may be settled by arbitration in the manner hereinafter provided.

Seventeenth. In the event of the Company or of the Postmaster-General requiring any further arrangements facilities or accommodation from each other with respect to any of the matters herein referred to the same shall be provided for by agreement between the parties hereto.

Eighteenth. The Postmaster-General and the Company may from time to time agree with each other as to the commutation or partial commutation for a fixed sum or sums of any payment or payments to be made by him to the Railway Company under this Agreement.

Nineteenth. All work done and duties performed by the Company for the Postmaster-General under the provisions of this Agreement shall be done and performed by them in a business-like manner but at the sole risk of the Postmaster-General and all work to be done and duties performed by the Company and all conveniences accommodation and facilities to be afforded to the Postmaster-General under the provisions of this Agreement shall

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shall so far as concerns the Postmaster-General be for or in relation to the purposes of Telegraphic communication.

Twentieth. All questions by this Agreement referred to arbitration shall be fixed and determined by two arbitrators one to be appointed by the Postmaster-General and the other by the Railway Company and in case such arbitrators disagree then by an umpire to be appointed by such arbitrators before they proceed upon the matters referred to them.

Twenty-first. This Agreement will be void unless the Electric Telegraph Bill now before Parliament becomes law in this Session of Parliament.

In Witness whereof

— No. 4. —

HEADS of AGREEMENT between HER MAJESTY'S POSTMASTER-GENERAL and THE SOUTH EASTERN RAILWAY COMPANY made on the withdrawal of the latter Company's opposition to the Electric Telegraphs Bill 1868.

THE Telegraph wires poles instruments and apparatus now belonging to the Railway Company shall remain their property and shall be subject to their control absolutely but to be used by them for the following purposes only (that is to say):—

The use of the block system.

The allocation of the rolling stock of the Company.

The transmission of information as to the position of trains running upon the line.

The conveyance of all other messages relating to the traffic or business of the Company or any matter arising thereout and the conveyance of all messages and the performance of all obligations which the Railway Company are bound to convey or perform under any existing Agreement with any Telegraph Company or any other Company or person.

The Company reserve their full right to increase alter and extend their existing poles instruments wires and apparatus and to use such additional or other poles instruments wires and apparatus for the purposes aforesaid but not otherwise.

The Railway Company will at any time upon the request of the Postmaster-General give their consent in writing or otherwise as the case shall require to the purchase by the Postmaster-General of the benefit of any and every existing Agreement between the Railway Company and any other Company or person for Telegraphic purposes and at any time after such purchase the Postmaster-General shall be at liberty to use all the privileges to which the selling Company or Companies was or were entitled as between such Company and the Railway Company but subject to the payments and obligations provided by any such Agreement to be rendered and performed to the Railway Company.

The Postmaster-General may from time to time when the benefit of any such Agreement is purchased by and vested in him give notice to the Railway Company that he requires to determine and put an end to such Agreement and if he and the Railway Company cannot agree as to the terms on which such Agreement shall be determined the matter shall be referred to and settled by arbitration.

The Railway Company shall at the expense of the Postmaster-General erect such new poles instruments wires and apparatus as shall be agreed upon and in default of agreement as shall be settled by arbitration.

And in respect of any such new wires poles or apparatus which shall be so erected the Postmaster-General will pay to the Company such sum per annum as shall be agreed upon or in case of difference as shall be determined by arbitration and such new wires shall be subject to the provisions of this Agreement.

The Railway Company shall maintain and keep in repair all poles instruments wires and apparatus in use for the time being and the Electrical Engineer of the Railway Company shall at the end of each half-year after this Agreement shall come into operation certify what sum has been expended in such maintenance and repairs and thereupon the Postmaster-General shall pay to the Railway Company the whole of such sum or such proportion thereof as shall be agreed upon and in default of agreement as shall be settled by arbitration.

The Postmaster-General shall pay to the Railway Company the following sums by way of compensation.

First. Twenty years' purchase of the net annual profits from the transmission of messages reckoned on the basis of the said receipts for the year ending the 30th day of June 1868 which sum shall subject to verification be taken to be the sum of £. 6,755. 15.

Second. The total amount of the estimated annual increase (as compared with the year ending 30th June 1868) of profits from the transmission of Telegraphic messages which might have been received by the Railway Company during twenty years from the 30th June 1868 such amount in case of difference to be settled by arbitration.

Third. Such sum as shall be agreed upon or in default of Agreement as shall be settled by

by arbitration in respect of the loss by the Railway Company of the privilege of granting way-leaves and making arrangements with other Telegraph Companies over the South Eastern system.

The Railway Company will if required by the Postmaster-General so to do from time to time receive from the public messages for transmission by Telegraph and shall transmit the same either to their place of destination if upon the Company's line or to some convenient Post-office as shall be arranged and in respect of such receipt and transmission the Company shall act as agents of the Postmaster-General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be settled by arbitration. In case any dispute shall arise as to the mode or order of transmission of any such messages the same shall (subject to the aforesaid provisions) be settled by arbitration.

Except as aforesaid the Railway Company shall not transmit or permit the transmission of any Telegraph message through their wires for the time being.

Subject to the last provision hereof this Agreement shall (unless otherwise agreed) come into operation on and from the 1st day of July 1869 but in case the Bill now before Parliament shall not pass into law until the Session of 1869 then on and from the 1st day of July 1870.

All questions by this Agreement referred to arbitration shall be fixed and determined by two arbitrators mutually appointed by the parties hereto or in case of difference between them by an umpire to be appointed by such arbitrators.

This Agreement will be void unless the Telegraph Bill now before Parliament becomes a law either in this or the next Session of Parliament.

In witness whereof the said Postmaster-General has hereunto set his hand and seal and the said South Eastern Railway Company have caused their common seal to be hereunto affixed this day of July 1868.

No. 5.

AGREEMENT made this Eighth day of July One Thousand Eight Hundred and Sixty-Eight between HER MAJESTY'S POSTMASTER-GENERAL of the one part and the NORTH EASTERN RAILWAY COMPANY (hereinafter called the "Railway Company") of the other part.

First. THIS Agreement to extend to all the Railways and Canals belonging to either jointly with any other Company or separately or leased by the Railway Company.

Second. The Railway Company may at any time or times hereafter require the Postmaster-General to extend and he shall thereupon extend the provisions of this Agreement to and so as to include any present or future lines leased or worked by them if they make arrangements to that effect with the owners of those lines and the Railway Company may also require the Postmaster-General to extend and he shall thereupon extend the provisions of this Agreement to and so as to include any lines leased or worked by them jointly with any other Railway Company if they make arrangements with such Company to that effect subject to any Agreements theretofore made between the owners of such lines and the Postmaster-General.

Third. The telegraph wires poles instruments and apparatus now belonging to the Railway Company shall remain the property of the Railway Company and be subject to their sole and absolute control and the Railway Company shall be entitled to increase alter and extend the same to such extent as they may deem proper. The Telegraph of the Railway Company (except as hereinafter provided) shall be used by them solely for the working of their Railway and canals and for the transmission of all messages in any way relating to the traffic or business of the Railway Company.

Fourth. The Railway Company may without payment to the Postmaster-General from time to time make arrangements with any Company or person for the erection and working of private Telegraphs along their line but such Telegraphs shall be used only for the transmission of messages on the private business of such Company or person or on business between such Company or person and the Railway Company and no money payment shall be received by the Railway Company in respect thereof except by way of annual rent or payment.

Fifth. The Postmaster-General shall give to the Railway Company three months' previous notice before he acquires the undertakings of any of the Telegraph Companies with which the Railway Company have Agreements and on the expiration of such notice such Agreements shall cease and determine.

Sixth. On the determination of such Agreement as aforesaid all the poles wires instruments and other telegraphic apparatus formerly belonging to the Telegraph Company

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(the agreement between whom and the Railway Company shall have been so terminated) on the Railway Company's lines or on the lines worked by them which were then employed for the transmission of the messages of the Railway Company shall be handed over to them by the Postmaster General free of charge in efficient working order so that the Railway Company may be in a condition at once to take up and carry on their own Telegraph work on their own system and thereafter the maintenance and working of such of the said posts wires instruments and other telegraphic apparatus as are now at the charge of the Telegraph Company aforesaid shall be at the charge of the Railway Company except as hereinafter provided.

Seventh. The Postmaster-General shall have a perpetual and (except as hereinbefore provided) exclusive right of way for telegraph poles and wires over the whole of the Railway Company's system including the right to continue any wires heretofore the property of any Telegraph Company and not used for railway purposes on the poles of the Railway Company and to affix any additional wires on such poles if sufficiently strong and high for the purpose and the Railway Company shall have the like powers to affix on the poles of the Postmaster-General any additional wires for Railway purposes and the cost of the maintenance of such poles when jointly used by the Postmaster-General and the Railway Company shall be divided between the Postmaster-General and the Railway Company in proportion to the number of wires belonging to each owner on each pole.

Eighth. The Postmaster-General shall pay to the Railway Company the following sums by way of compensation:

A. Such sums as shall be agreed upon or in default of Agreement as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of granting other way-leaves and making future arrangements with Telegraph or other Companies or persons over the Railway Company's lines and canals except as herein provided and also the value of the Railway Company's interests in the Telegraph receipts from public messages on their lines and also on the estimated increase of revenue from such messages:

B. Such sums as shall be agreed upon or in default of agreement as shall be settled by arbitration for any clerks now provided by the Telegraph Company and for any extra cost which the Railway Company may incur in working their Telegraph for railway purposes as a separate system and also:

C. Such sum for the perpetual right of way hereby granted over the whole of the Railway Company's system as shall be determined by agreement or arbitration.

And in fixing the several sums hereinbefore mentioned the Arbitrators shall have regard to the Agreements now existing between the Railway Company and the Telegraph Companies the prospective value of the way-leave and its acquisition by compulsory sale.

Ninth. The Postmaster-General shall be bound to transmit free of charge to their respective destinations in the United Kingdom all messages of the Railway Company *bonâ fide* relating to the business of the Railway Company.

Tenth. The Railway Company shall if required by the Postmaster General at any station where they may employ a Telegraph Clerk or where it may be agreed upon from time to time between the Railway Company and the Postmaster General and where the Postmaster-General shall have provided a Telegraph instrument or instruments in connection with the Telegraph wires of the Post Office during the time such Telegraph office is open for Railway purposes or during such hours as it may be agreed upon receive messages for transmission by Telegraph from the public and shall at the Postmaster-General's sole risk and expense transmit the same either to their place of destination if upon the Railway Company's lines or to some convenient Post Office as shall be arranged and in respect of such receipt and transmission the Railway Company shall act as agents of the Postmaster-General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Eleventh. The Railway Company may by arrangement with the Postmaster-General receive messages from the public for transmission by the Railway Company's wires subject however in all cases to priority for the messages of the Railway Company such public messages being transmitted at the Postmaster-General's sole risk and expense either to their place of destination if upon the Railway Company's lines or to some convenient Post-Office as shall be arranged and in respect of such receipt and transmission the Railway Company shall act as agents of the Postmaster-General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Twelfth. Except as aforesaid the Railway Company shall not transmit or permit the transmission of any Telegraph message through their wires for the time being.

Thirteenth. The Railway Company may shift the poles wires and apparatus belonging to the Postmaster-General when necessary for the purposes of their works or traffic but in all such cases the Postmaster-General shall pay to the Railway Company the actual costs

costs incurred in shifting such poles and apparatus but if such poles support the wires of the Railway Company and of the Postmaster-General the cost of shifting the same shall be apportioned according to the number of wires belonging to or respectively used by the Railway Company and the Postmaster-General.

Fourteenth. The Railway Company shall renew erect and maintain all wires and poles upon the Railway and the Postmaster-General shall for the renewal erection and maintenance of those erected for him or on his request including the conveyance of materials stores and workmen to be used or employed for such purposes and for the accommodation to be forwarded pay such sums as shall be agreed upon or in case of difference as shall be settled by arbitration but no additional system of poles for carrying new wires shall be erected till the existing poles are found insufficient nor shall any poles or wires be removed or abandoned by the Postmaster-General without the consent of the Railway Company or failing such consent unless an arbitrator shall otherwise determine.

Fifteenth. The Postmaster-General shall provide all Telegraphic instruments batteries stationery and other appliances apparatus and appurtenances required for the purposes of the Government and the messages of the public at the stations of the Railway Company and the Railway Company shall maintain such instruments and apparatus on such terms and conditions as may be agreed upon or failing agreement as may be settled by arbitration in the manner hereinafter provided.

Sixteenth. In the event of the Railway Company or of the Postmaster-General requiring any further arrangements facilities or accommodation from each other with respect to any of the matters herein referred to the same shall be provided for by agreement between the parties hereto.

Seventeenth. The Postmaster-General and the Railway Company may from time to time agree with each other as to the commutation or partial commutation for a fixed sum or sums of any payment or payments to be made by him to the Railway Company under this Agreement.

Eighteenth. All work done and duties performed by the Railway Company for the Postmaster-General under the provisions of this Agreement shall be done and performed by them in a business-like manner but at the sole risk of the Postmaster-General and all work to be done and duties performed by the Railway Company and all conveniences accommodation and facilities to be afforded by the Postmaster-General under the provisions of this Agreement shall so far as concerns the Postmaster-General be for or in relation to the purposes of Telegraphic communication.

Nineteenth. All questions by this Agreement referred to Arbitration shall be so settled in conformity with the enactments of The Companies Clauses Consolidation Act 1845 with respect to the settlement of disputes by arbitration.

Twentieth. This Agreement will be void unless the Electric Telegraph Bill now before Parliament becomes law in this Session of Parliament.

In witness whereof the said Postmaster-General hath hereunto set his hand and seal and the said North Eastern Railway Company have caused their Common Seal to be hereunto affixed the day and year first above written.

L. S.

The Common Seal of the North Eastern Railway Company was affixed hereto in the presence of } L. S.

W. B. RICHARDSON,
Solicitor,
York.

No. 6.

HEADS of AGREEMENT made this Ninth day of July One Thousand Eight Hundred and Sixty-Eight between HER MAJESTY'S POSTMASTER-GENERAL of the one part and the BRISTOL AND EXETER RAILWAY COMPANY (hereinafter called the "Railway Company") of the other part.

First. THIS Agreement to extend to all the Railways and Canals of the Railway Company.

Second. The Railway Company may at any time or times thereafter require the Postmaster-General to extend and he shall extend the provisions of this Agreement to

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and so as to include any present or future lines leased or worked by them if they make arrangements to that effect with the owners of those lines and the Railway Company may also require the Postmaster-General to extend and he shall thereupon extend the provisions of this Agreement to and so as to include any lines leased or worked by them jointly with any other Railway Company if they make arrangements with such Company to that effect, but subject to any Agreements heretofore made between the owners of such lines and the Postmaster-General.

Third. The Postmaster-General shall give to the Railway Company three months' notice before he acquires the undertakings of any of the Telegraph Companies with which the Railway Company have agreements and on the expiration of such notice all the Agreements and also all the contracts now existing between the Railway Company and the Electric or the Electric and International Telegraph Company and which are specified in the Schedule annexed hereto shall cease and determine.

Fourth. On such acquisition the Telegraph wires poles cables instruments and other telegraphic apparatus belonging to the Railway Company shall remain the property of the Railway Company and be subject to their control absolutely and the Railway Company shall be entitled to increase alter and extend to such extent as they may deem necessary their existing Telegraph system wires poles and apparatus and to use such additional or other wires poles or apparatus from time to time as they may think proper but subject as hereinafter provided for.

Fifth. On such acquisition as aforesaid all the poles wires instruments and other telegraphic apparatus cables and appurtenances belonging to the Telegraph Company on the Railway Company's lines worked by them which are then employed either wholly or partly in connection with the Railway Company's Telegraph work shall become the absolute property of the Railway Company, and shall be handed over to them by the Postmaster-General free of charge in efficient working order so that the Railway Company may be in a position at once to take up and carry on their own Telegraph work on their own system and thereafter the maintenance and working of the said poles wires instruments and other telegraphic apparatus shall except as hereinafter provided be at the charge of the Railway Company.

Sixth. The poles and wires if any which are now exclusively used by the Electric and International Telegraph Company for the purposes of public messages shall from and after such acquisition as aforesaid so far as the Railway Company is concerned become the property of the Postmaster-General.

Seventh. On such acquisition as aforesaid the Postmaster-General shall be entitled to use from Telegraph stations not on the lines of Railway all the wires belonging to the Telegraph Company on the lines embraced in the Agreements specified in the Schedule and employed exclusively in the transmission of the public Telegraph business which are erected on the poles to be handed over to the Railway Company under this Agreement and he shall also be entitled to call upon the Railway Company to erect and maintain at his cost additional wires on said poles provided they are sufficiently strong and high for the purpose and also to erect new poles at places to be agreed upon with wires over any of the lines and canals of the Railway Company but so that such new poles shall not interfere in any way with the convenience and working of the Railways and Canals of the Railway Company or obstruct the working of the traffic thereon. The Railway Company shall maintain all the poles and wires used for public messages the Postmaster-General paying for the same as may be agreed or settled by arbitration.

Eighth. The Railway Company shall have power to affix wires to the poles belonging to the Postmaster-General provided they are sufficiently strong and high for the purpose and the cost of the maintenance and renewal of such poles of the Railway Company and the Postmaster-General shall be borne and paid by the Postmaster-General and the Railway Company in proportion to the number of wires belonging to each respectively on each pole.

Ninth. The Railway Company may shift the poles wires and apparatus belonging to the Postmaster-General when necessary for the purposes of their works or traffic but in all such cases the Postmaster-General shall pay to the Railway Company the actual costs incurred in shifting such poles and apparatus but if such poles support the wires of the Railway Company and of the Postmaster-General the cost of shifting the same shall be apportioned according to the number of wires belonging to or respectively used by the Railway Company and the Postmaster-General.

Tenth. The Postmaster-General shall pay the Railway Company the following sums by way of compensation:—

First. Twenty years' purchase of the annual amount of the whole receipts of public telegraph messages received and forwarded over the wires belonging to or rented by the Railway Company reckoned on the basis of the receipts (derived therefrom) for the year ending the thirtieth day of June one thousand eight hundred and sixty-eight.

Second.

Second. Twenty times the amount of the estimated average annual increase of said receipts from telegraphic messages including new lines and new stations on existing lines such annual amount in case of difference to be settled by arbitration:

Third. All rents and annual or other payments payable to the Railway Company by public Telegraphic Companies during the still unexpired periods embraced in their respective Agreements and at the terms mentioned in said Agreements respectively:

Fourth. Such sums as shall be agreed upon or in default of Agreement as shall be settled by arbitration in respect of the loss by the Railway Company of the privilege of granting other way-leaves and making future arrangements with Telegraph or other Companies and of granting a monopoly to the Postmaster-General for the conveyance of Telegraphs over their Railways as herein provided for:

Fifth. Such sums as shall be agreed upon or in default of agreement as shall be settled by arbitration as the value of the Railway Company's reversionary interest in the Telegraph receipts from public messages on their line on the expiration of the Agreements with the Telegraph Company specified in the Schedule hereto which prevent the Railway Company at present from earning revenue from this source: Provided that in determining the sums payable to the Railway Company under section 5 of this Agreement the arbitrators or umpire shall have regard to and take into view the sums payable to the Company under section 4 so as that in no case shall the Railway Company receive double payment in respect of one and the same subject matter:

Sixth. Such sums as shall be agreed upon or in default of Agreement as shall be settled by arbitration for any clerks now provided by the Telegraph Company and for any extra cost which the Railway Company may incur in working their Telegraph for Railway purposes as a separate system:

Seventh. The Postmaster General shall transmit free of charge to their respective destinations in the United Kingdom all messages of the Railway Company *bonâ fide* relating to the business of the Railway Company:

Eighth. On such acquisition as aforesaid the Postmaster General shall as herein provided have a perpetual right of way for his poles and wires over the whole of the Railway Company's system included in the Agreements specified in the Schedule hereto and in consideration thereof he shall pay to the Railway Company such sum per mile per wire over the whole of the said system by way of yearly rent as shall be determined by Agreement between the parties or failing Agreement as shall be fixed by arbitration and the arbitrator in determining the amount to be paid to the Railway Company shall have regard to a compulsory sale being required from the Railway Company and shall also during the period of existing Agreements have regard to the Agreements which are contained in the Schedule hereto.

Eleventh. The Railway Company shall if required by the Postmaster General at any station where they may employ a Telegraph clerk or where it may be agreed upon from time to time between the Railway Company and the Postmaster General and where the Postmaster General shall have provided a Telegraph instrument or instruments in connection with the Telegraph wires of the Post Office during the time such Telegraph office is open for Railway purposes or during such hours as may be agreed upon receive messages for transmission by Telegraph from the public and shall at the Postmaster General's sole risk and expense transmit the same either to their place of destination if upon the Railway Company's lines or to some convenient Post Office as shall be arranged and in respect of such receipt and transmission the Railway Company shall act as agents of the Postmaster General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Twelfth. The Railway Company may by arrangement with the Postmaster General receive messages from the public for transmission by the Railway Company's wires subject however in all cases to priority for the messages of the Railway Company such public messages being transmitted at the Postmaster General's sole risk and expense either to their place of destination if upon the Railway Company's lines or to some convenient post office as shall be arranged and in respect of such receipt and transmission the Railway Company shall act as agents of the Postmaster General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Thirteenth. The Railway Company may without payment to the Postmaster General from time to time make arrangements with any Company or person for the erection and working of private Telegraphs along their line but such Telegraphs shall be used only for the transmission of messages on the private business of such Company or person or on business between such Company or person and the Railway Company and no money payment shall be received by the Railway Company in respect thereof except by way of annual rent or payment.

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Fourteenth. Except as aforesaid the Railway Company shall not transmit or permit the transmission of any Telegraphic message through their wires for the time being.

Fifteenth. The Railway Company shall renew erect and maintain all wires and poles upon the Railway and the Postmaster General shall for the renewal erection and maintenance of those erected for him or on his request including the conveyance of materials stores and workmen to be used or employed for such purposes and for the accommodation to be afforded pay such sums as shall be agreed upon or in case of difference as shall be settled by arbitration but no additional system of poles for carrying new wires shall be erected till the existing poles are found insufficient nor shall any poles or wires be removed or abandoned by the Postmaster General without the consent of the Railway Company or failing such consent unless an arbitrator shall otherwise determine.

Sixteenth. The Postmaster General shall provide all telegraphic instruments batteries stationery and other appliances apparatus and appurtenances required for the purposes of the Government and the messages of the public at the stations of the Railway Company and the Railway Company shall maintain such instruments and apparatus on such terms and conditions as may be agreed upon or failing Agreement as may be settled by arbitration in the manner hereinafter provided.

Seventeenth. In the event of the Railway Company or of the Postmaster General requiring any further arrangements facilities or accommodation from each other with respect to any of the matters herein referred to the same shall be provided for by Agreement between the parties hereto.

Eighteenth. The Postmaster General and the Railway Company may from time to time agree with each other as to the commutation or partial commutation for a fixed sum or sums of any payment or payments to be made by him to the Railway Company under this Agreement.

Nineteenth. All work done and duties performed by the Railway Company for the Postmaster General under the provisions of this Agreement shall be done and performed by them in a business-like manner but at the sole risk of the Postmaster General and all work to be done and duties performed by the Railway Company and all conveniences accommodation and facilities to be afforded to the Postmaster General under the provisions of this Agreement shall so far as concerns the Postmaster General be for or in relation to the purposes of telegraphic communication.

Twentieth. All matters in difference between the Postmaster General and the Railway Company under this Agreement shall be settled by arbitration in conformity with the provisions of the Railway Companys Arbitration Act 1859.

Twenty-first. This Agreement will be void unless the Electric Telegraph Bill now before Parliament becomes law in this Session of Parliament.

In witness whereof

SCHEDULE referred to in this AGREEMENT.

1. Agreement between the Electric Telegraph Company and the Bristol and Exeter Railway Companies dated, 7th April 1852.
2. Memorandum endorsed on the above Agreement dated - - - - - - - - - - - 22nd June 1859.
3. Agreement between the above-named Companies dated 30th June 1860.

No. 7.

AN AGREEMENT made this Eleventh day of July One Thousand Eight Hundred and Sixty-Eight between HER MAJESTY'S POSTMASTER-GENERAL of the first part THE SUBMARINE TELEGRAPH COMPANY between Great Britain and the Continent of Europe incorporated by Royal Charter of the second part and THE SUBMARINE TELEGRAPH COMPANY between France and England (Société Carmichael and Company) of the third part.

WHEREAS Her Majesty's Government have declared their intention of purchasing and working the Electric Telegraph in the United Kingdom with the view of reducing its rates and extending its advantages to many places which are now unprovided with Telegraphic communication:

And whereas the Government propose to buy the two submarine cables between England

England and Holland forming a part of the system of the Electric and International Company:

And whereas the Government also propose to buy from Reuter's Telegraph Company a cable between England and the Island of Norderney which is worked under an Agreement by the Electric Telegraph Company:

And whereas the parties of the second and third parts are the owners of three submarine cables between England and France two submarine cables between England and Belgium and one submarine cable between the Channel Islands and France:

And whereas it is agreed by and between the parties hereto that the parties of the second and third parts shall alone work the three cables so proposed to be purchased by the Government as aforesaid. And the parties hereto agree to enter into the following provisional Agreement to be ratified and carried out so soon as the property of the different Telegraph Companies so proposed to be purchased shall have been transferred to the Postmaster General.

1. The wires from London in connection with the wires of the two cables to Holland and the cable to Norderney shall be brought into the Submarine Company's office in Threadneedle-street at the expense of the Postmaster General.

2. An account shall be kept of the gross earnings from the transmission of messages between the United Kingdom and the Continent of Europe whether passing by the cables to be bought by the Postmaster General or by the cables of the Submarine Telegraph Companies.

3. The Submarine Companies parties hereto shall undertake the exclusive management and pay all salaries wages and every other expense for working and repairing all the cables between England and the Continent for one-fourth part of the gross earnings but such one-fourth part never to be less than such an annual sum as may be agreed on between the parties or to be settled by arbitration in case of difference of opinion.

4. The Postmaster General shall receive as rental of the land lines between London and the coast in connection with the cables and for the transmission of messages from London to any station in the United Kingdom: One-fifth part of the gross earning from messages between London and the Continent two-fifths of the receipts from any other station in Great Britain one-half of the receipts from any station in Ireland.

5. The Postmaster General shall at his sole expense repair and maintain all the land lines and pay all dues and way-leaves to Railway Companies or others over whose territory such lines pass.

6. After deducting from the gross earnings the sums to be paid to the Postmaster General and the Companies as provided by articles three and four the remainder shall be divided in equal moieties between the Postmaster General and the Companies and the sum thus received by the Postmaster General shall be the amount to be paid by the Companies for the lease of the Government cables.

7. Neither the Postmaster-General nor the Companies shall reduce the existing rates for messages between any part of the United Kingdom and the Continent without the consent of the other.

8. Any additional cables between England and France or England and Belgium shall be laid down at the sole expense of the Submarine Companies nevertheless the additional capital to be expended for this purpose shall not participate in the distribution of the nett receipts or remainder as provided for by article six but the expense of repairing the cables shall be added to the payment of the Company for management as provided for by article three and in the event of any disagreement as to the amount to be claimed by the Companies or either of them for such repairs the same is to be settled by arbitration as hereinafter mentioned.

9. All the mutual obligations and Agreements between the British and Irish Magnetic Telegraph Company and the two Submarine Telegraph Companies except where altered by this Agreement shall remain in full force.

10. If the Submarine Companies find it impossible to repair either of the cables to Holland or Norderney the Postmaster-General at his sole expense shall upon the certificate of a competent engineer declaring the impossibility of repairing it replace such cable if it be shown that the international service requires it but not otherwise.

11. This Agreement shall remain in force until the Company's concessions from the French and Belgian Governments expire.

12. All questions by this Agreement referred to arbitration shall be fixed and determined by two arbitrators one to be appointed by the Postmaster General and the other by the two submarine Companies and in case such arbitrators disagree then by an umpire to be appointed by such arbitrators before they proceed upon the matters referred to them.

13. This Agreement will be void unless the Electric Telegraphs Bill now before Parliament becomes law either in this or the Session of Parliament in 1869.

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No. 8.

AN AGREEMENT made this day of 1868 between HER MAJESTY'S POSTMASTER GENERAL of the one part and REUTER'S TELEGRAM COMPANY (LIMITED) (hereinafter called the Company) of the other part.

WHEREAS the Company were originally incorporated under "The Companies' Act 1862" on the 20th February 1865 principally for the purchase of the business theretofore established and carried on by Mr. Julius Reuter of the collection and distribution of Telegraphic intelligence and the Company are also engaged in transmitting messages by means of Electric Telegraphs. The Company are also possessed of a Submarine Telegraph Cable from Lowestoft to Norden in North Germany called the Norderney Cable with special and exclusive concessions and privileges annexed thereto.

And whereas the Company have entered into a working arrangement with the Electric Telegraph Company whereby that Company have laid down four land wires from London to Lowestoft connected with the four wires of the Norderney Cable and have agreed to efficiently work the said cable and the land wires in connection therewith for the term of ten years and such further terms as therein expressed and by this working arrangement a certain revenue is secured to the Company.

And whereas by an Agreement made between the Company the Electric Telegraph Company and the Indo-European Telegraph Company the Company have agreed to appropriate to the use of the Indo-European Telegraph Company for the term of ten years from the completion and opening by the said Company of Telegraphic communication between Norden and Teheran one of the four wires and in certain events a second of the four wires of the Norderney Cable for the exclusive transmission of the messages of the Indo-European Telegraph Company whose line is to be constructed as a continuation of the said Norderney Cable and by the same Agreement the Electric Telegraph Company agreed to collect and distribute in the United Kingdom all the messages of the Indo-European Telegraph Company.

And whereas owing to the delay in the construction of the continental land wires in connection with the Norderney Cable the four wires of the said cable have only been in full working order since the 4th day of February 1868.

And whereas a Bill is now pending in the House of Commons "to enable Her Majesty's Postmaster-General to acquire work and maintain Electric Telegraphs" and inasmuch as the Company deemed that the said Bill injuriously affected their rights they petitioned against the same and appeared by Counsel before the Committee of the House of Commons to whom the said Bill was referred in support of the said petition and whilst the said Bill was pending before the Committee it was agreed between the parties hereto that upon consideration of the said petition being withdrawn and no further opposition being made to the said Bill by the Company and also in consideration of the mutual conditions and covenants hereinafter contained the Company should transfer to the Postmaster General and the Postmaster General should purchase so much of the rights and interests of the Company as are hereinafter specified. Now these presents witness and it is hereby agreed between the parties hereto as follows:

1. The Company may with the authority of two-thirds of the votes of its Shareholders present in person or by proxy at a General Meeting of the Company specially convened for the purpose sell and convey and the Postmaster General shall on demand of the Company under its common seal purchase so much of the Undertaking of the said Company as consists of the Norderney Cable and all the property rights and privileges of the Company therein or connected therewith and the benefit of all concessions from foreign Governments in relation to the said Cable and of all contracts between the Company and the Electric Telegraph Company and the Indo-European Telegraph Company or either of them.

2. The price to be paid by the Postmaster-General to the Company shall be as follows:—

(*a*). Twenty years' purchase of the annual net profits derived by or secured to the Company from the transmission of messages through the Norderney Cable such annual profits being calculated upon the experience of the month of March 1868.

(*b*). Twenty years' purchase of the profits determined by arbitration as hereinafter provided for as being the probable profits to be derived by the Company under the contract with the Indo-European Telegraph Company.

(*c*). There may be deducted from the sums aforesaid such amount (if any) as may be determined by arbitration to represent any greater relative risk attaching to the maintenance of the Norderney Cable than to the maintenance of land lines of Telegraph.

3. The purchase-money and compensation to be paid by the Postmaster General under the provisions aforesaid shall be paid to the Directors of the Company and the receipt under the common seal of the Company countersigned by the Chairman or Deputy Chairman

Chairman and by the Secretary thereof shall be a sufficient discharge to the Postmaster General for the amount therein specified to be received and the Postmaster General shall not be required to see to the application of the sum so paid or be responsible for the misapplication thereof.

4. The Postmaster General shall assume to himself all duties and liabilities of the Company under its contracts with relation to the said cable, and shall indemnify the Company against any breach of any covenants, duties or liabilities with relation to the said matters.

5. All monies due to or from the Company at the date of the delivery of possession of the said Cable to the Postmaster General shall belong to and be discharged by the Company.

6. If any difference arises between the parties hereto concerning the sums hereby covenanted to be paid by the Postmaster General every such difference shall from time to time, be settled by arbitration in the manner prescribed by the "Companies' Clauses Consolidation Act 1845" with respect to the settlement of disputes by arbitration and the provisions of that Act shall for this purpose be deemed to be a part of this Agreement.

7. The Company shall forthwith withdraw its opposition to the said Bill and shall not interfere in the passage thereof unless for the purpose of obtaining a confirmation of this Agreement.

8. This Agreement shall be void unless the said Bill now before Parliament becomes law during the present Session.

No. 9.

AGREEMENT made the Eighth day of July One thousand Eight hundred and Sixty-Eight between Her Majesty's Postmaster General of the one part and The Atlantic Telegraph Company and The Anglo-American Telegraph Company (Limited) of the other part.

It is agreed that if the Postmaster General acquires the undertaking of the Electric and International Telegraph Company the following provisions shall thenceforth have effect:—

1. The existing Agreement of thirteenth November One thousand eight hundred and Sixty-seven between Anglo-American and Atlantic Companies and the Electric and Magnetic Companies to be annulled.

2. The Postmaster General to give to the Anglo-American and Atlantic Companies the exclusive use of two wires with Instruments from London to Valentia (*viâ* Wexford) and Instrument Room in London.

3. The Postmaster General to undertake as between him and the two Companies the maintenance of the Wires and to collect and distribute the messages.

4. One-half of the British rate (One shilling for twenty words) as in Bill to go to the Postmaster General the other half to the two Companies' service Messages free over British wires.

5. The Companies to work the two wires throughout and appoint and pay all Clerks employed in the working.

6. In case of accident to or stoppage of wires the Postmaster General to provide other pending repairs which are to be executed as soon as possible.

7. The Postmaster General to hand to the Companies in London all messages which can be sent by the Companies' Cables and the Companies to hand to the Postmaster-General in London all Messages received through the Cables unless otherwise expressly required by the sender in either case.

8. Formal Agreement with all necessary and proper details to be executed.

9. Any question between the Companies and the Postmaster General as to the detailed Agreement or the above Heads and also the Settlement of Accounts and Questions under the existing Agreement and otherwise to be settled by an Arbitrator to be agreed on between the parties and failing Agreement to be nominated by the Lord Chief Justice of the Common Pleas for the time being as sole referee.

10. This Agreement to be void if the Bill now pending is not passed this Session.

No. 10.

App. No. 6.

AGREEMENT between Her Majesty's Postmaster General on the one part and The North British Railway Company incorporated by Act of Parliament on the second part.

Whereas a Bill has been brought before Parliament intituled "A Bill to enable Her Majesty's Postmaster General to acquire work and maintain Electric Telegraphs" And whereas the said second parties are owners of a system of Telegraphs laid down upon their lines of Railway worked in concert with the Telegraphs of various public Telegraph Companies and connected across the Firths of Forth and Tay by means of submarine cables belonging to the Electric Telegraph Company And whereas the said second parties are under Agreements with the Electric Telegraph Company the Universal Private Telegraph Company and the Magnetic Telegraph Company whereby such Companies have a way-leave right to lay down lines of Telegraphic communication over the railways of the said second parties or some part or parts thereof and certain rights and privileges are conferred by the said Telegraph Companies upon the said second parties And whereas the said first party has concluded Agreements with the said Telegraph Companies for the acquisition of their whole corporate rights and property And whereas in pursuance of the objects of the said Bill the Postmaster General has made proposals to the said second parties for the purchase of the right to establish lines of public Telegraph over their said railways, which the said second parties have agreed to accept Now therefore it has been and is hereby mutually agreed by and between the said parties hereto as follows:—

1. So soon as this Agreement shall come into operation as hereinafter provided the existing agreements between the said second parties and the said Telegraph Companies shall come to an end and the Postmaster General shall have a perpetual way-leave right to lay down such lines of Telegraphic communication as he may think fit over and upon the whole railways belonging to the said second parties and to send over the Railways of the said second parties such persons as may be employed upon such Railways on the Telegraphic business of the Post Office and all stores and materials required in the erection repair or working of the Post Office Telegraphs upon such Railways upon such terms and conditions as may be agreed upon or in default of agreement as may be fixed by arbitration; and in fixing such terms and conditions the Arbitrators or Umpire as the case may be shall have due regard to the existing Agreements between the said second parties and the said Telegraph Companies and to the element of compulsory sale.

2. The Telegraph wires poles instruments and apparatus now belonging to the second parties shall remain their property and in any case where the poles and apparatus now belong to a Telegraph Company the poles and such of the wires and apparatus as are used for the purposes of the Railway shall be transferred to the said second parties by the Postmaster General free of charge and be subject to their control absolutely but to be used by the said second parties for the following purposes only (that is to say):—

The use of the block system;

The allocation of the rolling stock of the said second parties;

The transmission of information as to the position of trains running upon the line;

The conveyance of all other messages relating to the traffic or business of the said second parties; and

The performance of any obligation as to the transmission of messages under any existing Agreement with any Company or person.

3. The said second parties reserve their full right to increase alter and extend their existing wires and apparatus, and to use such additional or other wires or apparatus for the purposes aforesaid but not otherwise.

4. The said second parties may also notwithstanding this Agreement and without payment to the Postmaster General, from time to time make arrangements with the coalmasters ironmasters and traders generally or with the Commissioners of Lighthouses and other public bodies upon the North British system for the erection and working of private Telegraphs between coalpits ironworks factories and the stations of the said second parties and along their line, but such Telegraphs shall be used for the transaction of private business only between the said second parties and the parties with whom such arrangements may be made or their correspondents and no money payment shall be made or received in respect thereof except by way of annual rent or payment.

5. The said cables across the said Firths of Forth and Tay shall belong to the Postmaster General at whose cost they shall be maintained but the said second parties shall at all times hereafter have the exclusive use of four of the wires in the cables across the Firth of Forth and two of the wires in the cables across the Firth of Tay free of charge.

6. It shall be lawful for the Postmaster General to require the said second parties to erect such new poles as he shall think fit along the said railways and thereon or on the existing poles of the said second parties, in so far as they are capable of bearing the same to put up such new wires or apparatus as he shall think fit but such new poles

wires

wires and apparatus shall be erected by the said second parties only, and upon terms to be agreed upon between them and the Postmaster General or in case of difference to be fixed by arbitration.

7. It shall be lawful for the said second parties from time to time in altering or repairing any part of their Railway Works to shift or vary the position of the poles wires and other apparatus belonging to the Postmaster General situated at the place where such alterations or repairs are being carried out but all such operations shall be so executed as to occasion as little interruption as may be to the Telegraphic communication and the Postmaster General shall indemnify the said second parties for any expense they may incur in so shifting such poles wires and apparatus.

8. The Postmaster General shall pay to the said second parties the following sums by way of compensation:—

(1) Twenty years' purchase of the present value of the trade receipts from Telegraphic messages of the said second parties reckoned on the basis of the receipts for the week ending the Fifth day of June One thousand Eight hundred and Sixty-eight which sum shall subject to verification be taken to be the sum of Forty-eight pounds seventeen shillings and one penny or at the rate of Two thousand five hundred pounds per annum.

(2) Twenty times the amount of the estimated average annual increase of trade receipts from Telegraphic messages, such annual amount in case of difference to be settled by arbitration.

(3) Such sum as shall be agreed upon or in default of Agreement as shall be settled by arbitration in respect of the loss by the said second parties of the privilege of despatching free messages over the wires of the Electric Telegraph Company to which privilege the said second parties are entitled for the term of Fifty years or thereabouts.

(4) Such sum as shall be agreed upon or in default of Agreement as shall be settled by arbitration in respect of the loss by the said second parties of the privilege of granting way-leaves and making arrangements with other Telegraph Companies over the North British system.

(5) Such sum as shall be agreed upon or in default of Agreement as shall be fixed by arbitration in respect of the loss by the said second parties of the services of the clerks of the Electric Telegraph Company at their various railway stations.

9. If the Postmaster General at any time require to use the stations of the said second parties for the receipt and transmission of messages by Telegraph from the public the said second parties shall act as agents of the Postmaster General and shall transmit such messages either to their place of destination if upon the said second parties' lines or to some convenient post-office as shall be arranged and in respect of such receipt and transmission the said second parties shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be settled by arbitration Provided always that such messages shall not have priority over messages on the business of the Railway.

10. Except as aforesaid the said second parties shall not transmit or permit the transmission of any Telegraphic message through their wires for the time being.

11. The said second parties shall maintain the Government poles wires instruments and apparatus upon their said Railways upon such terms as shall be agreed upon or in case of difference as shall be settled by arbitration.

12. This agreement shall not come into operation until the Postmaster General shall commence the working of some line of Telegraph in Scotland or until the Postmaster General shall have signified in writing his desire that the same should take effect.

13. All questions by this Agreement referred to arbitration shall be fixed and determined by two Arbitrators mutually appointed by the parties hereto or in the case of difference between them by an Umpire to be appointed by such Arbitrators.

14. This Agreement will be void unless the Electric Telegraph Bill now before Parliament becomes a law either in this or in the next Session of Parliament.

Dated this 16th day of July 1868.

(signed) *F. I. Scudamore*

John Stirling. L. S.

No. 11.

App. No. 6.

HEADS of AGREEMENT between Her Majesty's Postmaster General and the Caledonian Railway Company.

First. The Telegraph wires poles instruments and apparatus now belonging to the Railway Company on their lines of Railway and Canals shall remain the property of the Company and be subject to their control absolutely but shall be used by them solely for the working of their Railway and Canals and for the transmission of all messages in any way relating to the traffic or business of the Company.

The Railway Company shall be entitled to increase alter and extend to such extent as they may deem necessary their existing wires and apparatus and to use such additional or other wires or apparatus for the purposes aforesaid but not otherwise.

Second. The Railway Company may also notwithstanding this Agreement and without payment to the Postmaster General from time to time make arrangements with light-house commissioners and also with coalmasters ironmasters and traders generally upon the Caledonian system for the erection and working of private Telegraphs between coal-pits ironworks factories and the stations of the Company and along their line but such Telegraphs shall be used for the transaction of private business only between the Railway Company and the parties with whom such arrangements may be made and their correspondents and no money payment shall be made or received in respect thereof except by way of annual rent or payment.

Third. On the acquisition by the Postmaster General of the undertakings of any of the Telegraph Companies with which the Railway Company have Agreements such Agreements shall cease and determine except as regards the provisions contained therein respectively as to the payment of rents or way-leaves to the Caledonian Company and the provisions relating to the carriage of stores office accommodation fire and light and free passes to employés in regard to all which the Postmaster General shall enjoy the same privileges but no more as the Telegraph Companies exercise at present under their respective Agreements and that for the respective periods specified in the said Agreements from the date of the Postmaster General so acquiring the undertakings.

Fourth. On such acquisition as aforesaid all the posts wires instruments and other telegraphic apparatus belonging to the Telegraph Companies on the Railway Company's lines or on the lines worked by them which are then employed in connection with the Railway Company's Telegraph work shall become the absolute property of the Railway Company and shall be handed over to them by the Postmaster General free of charge in efficient working order so that the Railway Company may be in a position at once to take up and carry on their own Telegraph work on their own system and thereafter the maintenance and working of the said posts wires instruments and other Telegraphic apparatus which are now at the charge of the Telegraphic Companies respectively shall be at the charge of the Railway Company.

Fifth. On such acquisition as aforesaid the Postmaster General shall be entitled for the respective periods of the several Agreements aforesaid to use free of charge and to keep up and maintain all the wires belonging to the respective Telegraph Companies on the line employed exclusively in the transmission of the public Telegraph business which are erected on the poles to be handed over to the Railway Company under Clause Fourth and he shall also be entitled during such period aforesaid to erect and maintain additional wires on said poles provided they are sufficiently strong and high for the purpose and also to erect new poles with wires over any of the sections of the line embraced in the respective Agreements between the Railway Company and the Telegraph Companies, but so that such new poles or wires shall not interfere in any way with the convenience or working of the railway or canals of the Company or obstruct the working of the traffic thereon And provided also that all damage done to the works and property of the Railway Company by and through the operations of the Postmaster General shall be paid for or made good by him.

Sixth. It shall be obligatory on the Postmaster General within three days after receiving notice from the Railway Company to that effect to shift the posts wires and apparatus belonging to him as often as the Railway Company may consider it necessary for the purposes of their works or traffic but in all such cases the Railway Company shall pay to the Postmaster General the actual costs incurred in shifting posts and apparatus.

Seventh. The Postmaster General shall pay the Railway Company the following sums by way of compensation:—

First. Twenty years' purchase of the amount of the whole receipts drawn by the Railway Company for the transmission of public Telegraphic messages reckoned on the basis of the receipts for the week ending Twelfth June One thousand eight hundred and sixty-eight which sum shall subject to verification be taken to be the sum of Twenty-three pounds two shillings and threepence or say at the rate of Twelve hundred pounds per annum.

Secondly.

Secondly. Twenty times the amount of the estimated average annual increase of said receipts from Telegraphic messages such annual amount in case of difference to be settled by arbitration.

Third. All rents and annual payments payable to the Railway Company by public Telegraph Companies during the still unexpired periods embraced in their respective Agreements and that at the terms mentioned in said Agreements respectively.

Fourth. Such sum as shall be agreed upon or in default of Agreement as shall be settled by Arbitration in respect of the loss by the Railway Company of the privilege of granting other way-leaves and making future arrangements with other Telegraph Companies over the Northern Section of the Railway Companies' line.

Fifth. Such sum as shall be agreed upon or in default of Agreement as shall be settled by Arbitration as the value of the Railway Company's reversionary interest in the rents for way-leaves from public Telegraph Companies as would be derived by them at the expiry of the current Agreements between them and the respective Telegraph Companies on the other portions of their system.

Sixth. Such sum as shall be agreed upon or in default of Agreement as shall be settled by Arbitration as the value of the Railway Company's reversionary interest in the Telegraphic receipts from public messages on certain sections of their line after the expiry of the Agreements with the respective Telegraph Companies which prevent the Railway Company at present from earning revenue from this source and in determining the sums payable to the Railway Company under Clauses Fifth and Sixth the Arbitrators or Umpire shall have regard and take into view the results of the experience of the Railway Company in working the Telegraph for the public on such portions of their line as they have so worked.

Seventh. The Postmaster-General shall be bound either to transmit the Railway Company's messages to or from any "foreign" station in the United Kingdom free of charge or to compensate the Railway Company for this privilege in the event of his determining to withdraw it at any time Such compensation to be determined by agreement between the parties or failing agreement to be fixed by arbitration.

Eighth. On such acquisition as aforesaid the Postmaster General shall have a perpetual right of way for his poles and wires over the whole of the Railway Company's system and in consideration thereof he shall pay to the Railway Company such sum per mile per wire over the whole line by way of yearly rent as shall be determined by agreement between the parties or failing agreement as shall be fixed by arbitration.

Ninth. Such sums as shall be agreed upon or in default of agreement as shall be settled by arbitration for the loss occasioned by the removal of any clerks now provided by the Telegraph Companies and for any extra cost which the Railway Company may incur in working their Telegraph for railway purposes as a separate system.

Tenth. The arbitrator in determining the amount to be paid to the Railway Company under this Agreement shall have regard to a compulsory sale being required from the Railway Company.

Eighth. The Railway Company shall if required by the Postmaster General so to do from time to time receive messages for transmission by Telegraph from the public and shall at the Postmaster General's sole risk and responsibility transmit the same either to their place of destination if upon the Company's lines or to some convenient post office as shall be arranged and in respect of such receipt and transmission the Company shall act as agents of the Postmaster General and shall receive in respect thereof such remuneration as shall be agreed upon or in case of difference as shall be from time to time settled by arbitration.

Ninth. Except as aforesaid the Railway Company shall not transmit or permit the transmission of any Telegraphic message through their wires for the time being.

Tenth. The Company shall maintain the Government wires and poles upon such terms as shall be agreed upon or in case of difference as shall be settled by arbitration.

Eleventh. All questions by this Agreement referred to arbitration shall be fixed and determined by two arbitrators mutually appointed by the parties or in the case of difference between them by an umpire to be appointed by such arbitrators before they proceed upon the matters referred to them.

Twelfth. This Agreement shall be void unless the Electric Telegraphs Bill now before Parliament becomes a law either in this or in the next Session of Parliament.

Dated this sixteenth day of July one thousand eight hundred and sixty-eight.

(signed) *James Kemp,*
for the Caledonian Railway Company.

No. 12.

App. No. 6.

ARTICLES of AGREEMENT made this Fourteenth day of July One thousand eight hundred and sixty-eight between HER MAJESTY'S POSTMASTER GENERAL of the one part and THE UNIVERSAL PRIVATE TELEGRAPH COMPANY hereinafter called The Company of the other part

WHEREBY it is mutually agreed and declared that if the said Company shall with the authority of two-thirds of the Votes of its Shareholders present in person or by proxy at a general meeting of the Company specially convened for the purpose decide to sell their Undertaking to the said Postmaster General then the said Postmaster General shall upon demand of the Company under its Common Seal purchase the whole Undertaking of the said Company.

The price to be paid by the Postmaster General to the Company for its Undertaking shall be twenty years' purchase of their net profits during the year ending on the thirtieth day of June one thousand eight hundred and sixty-eight from the Undertaking and the price paid by them for the purchase of the patents for Wheatstone's A B C Telegraphic Instrument and for the suspension of cables.

If any difference arise between the Postmaster General and the said Company concerning the amount of such net profits as aforesaid or concerning the further sums hereinbefore provided to be paid to them in addition to the purchase money for their net profits such difference shall be settled by arbitration in the manner prescribed by The Railway Companies Arbitration Act 1859 with respect to the settlement of disputes by arbitration and the provisions of that Act with respect to arbitration shall be deemed to be incorporated with this Act.

That the Section of the Telegraph Act One thousand eight hundred and sixty-eight with reference to the compensation of officers and clerks shall be deemed to be incorporated in this Agreement and shall apply to the officers and clerks of the Company in the same manner as if the Company were expressly named therein.

Nothing in this Agreement shall take effect unless and until Her Majesty's Postmaster General shall acquire the undertaking of some other Telegraph Company under the provisions of the said Telegraph Act One thousand eight hundred and sixty-eight.

In witness whereof the said parties hereto have hereunto set their respective Seals the day and year first above written.

No. 13.

HEADS of AGREEMENT made this 16th day of July 1868 between HER MAJESTY'S POSTMASTER GENERAL and THE LONDON and PROVINCIAL TELEGRAPH COMPANY LIMITED of No. 101 Cannon-street in the City of London.

1. THE Postmaster General to give 20 years' purchase of the present net profits of the Company such net profits to be considered the difference between gross receipts and working expenses.

2. The highest market quotation of the ordinary shares between the 1st day of June 1868 and the 8th day of July 1868 (to be paid for the ordinary shares) together with what an arbitrator shall give in consideration of the prospective profits of the Company.

3. Compensation to officers and clerks to be the same as in the Telegraph Companies' Clauses of the Bill. And the several Clauses of the Bill providing for the distribution of the purchase-money and funds of the Telegraph Companies to be applied to this Company.

George Sherman,

As Chairman and on behalf of the London and Provincial Telegraph Company Limited.

Appendix, No. 7.

STATEMENT showing the MILEAGE of RAILWAYS under Agreement with the TELEGRAPH COMPANIES, and the Number of Years which such Agreements have to run.

STATEMENT showing the MILEAGE of WIRE on RAILWAYS under Agreement with the TELEGRAPH COMPANIES, and the Number of Years which such Agreements have to run.

Appendix, No. 7.

PAPERS handed in by Mr. *Scudamore*, 15 July 1868.

STATEMENT showing the MILEAGE of RAILWAYS under Agreement wit

Note A.—When two Companies have agreements with the same Railway, then the agreement having the longest term to run has been take

RAILWAYS.	Years which Agreements have to run.											
	3.	4.	5.	6.	7.	7½.	8.	9.	10.	11.	12.	13.
	MILEAGE OF LINE.											
Bristol and Exeter	–	–	–	–	–	–	–	–	135	–	–	–
Banbridge and Lisburn	–	–	–	–	–	–	–	–	–	–	–	–
Cork, Blackrock, and Passage	–	–	–	–	–	–	–	–	–	–	–	–
Caledonian	–	–	–	–	–	–	–	–	–	419	–	–
Cornwall	–	–	–	–	–	–	–	–	–	–	–	–
Cornwall, West	–	–	–	–	–	–	–	–	–	–	–	–
Colne Valley	–	–	–	–	–	–	–	–	–	–	–	20
Cockermouth and Workington	–	–	–	–	–	–	–	–	–	–	–	32
Cockermouth, Keswick, and Penrith												
Carmarthen and Cardigan	–	–	–	–	–	–	–	–	–	–	–	–
Deeside	–	–	–	–	17	–	–	–	–	–	–	–
Dublin and Drogheda	–	–	–	–	–	–	–	–	–	–	–	–
Eastern Counties and Norfolk												
East Suffolk	–	–	–	–	–	–	–	–	728	–	–	–
Eastern Union												
Furness	–	–	–	–	–	–	–	–	–	–	–	–
Great Western	–	–	–	–	–	–	–	–	–	–	–	–
Great Northern of Scotland	–	–	–	257	–	–	–	–	–	–	–	–
Great Northern	–	–	704	–	–	–	–	–	–	–	–	–
Great Northern (Dunstable, Luton, and Hertford Branch).	–	–	–	–	–	–	–	–	–	–	–	–
Hull and Hornsea	–	–	–	–	–	–	–	–	–	–	–	–
Highland	–	–	–	–	–	–	–	–	–	–	–	–
London and South Western	–	–	–	–	–	–	–	–	–	–	–	–
London, Brighton, and South Coast	–	–	–	–	–	–	–	–	–	–	–	–
Lancashire and Yorkshire	–	–	–	–	–	–	–	–	–	–	–	–
London and Blackwall	–	–	–	–	–	–	–	–	–	–	–	–
London and North Western	–	–	–	–	–	1,346	–	–	–	–	–	–
London, Tilbury, and Southend	–	–	–	–	49	–	–	–	–	–	–	–
London, Chatham, and Dover	–	–	–	–	–	–	–	136	–	–	–	–
Llynvi Valley	–	–	–	–	–	–	–	–	30	–	–	–
Midland	–	–	–	–	–	–	761	–	–	–	–	–
Maryport and Carlisle	–	38	–	–	–	–	–	–	–	–	–	–
Manchester, Sheffield, and Lincoln	–	–	–	–	–	–	–	–	–	–	–	–
Monmouthshire Railway and Canal	–	–	–	–	–	–	–	–	–	–	–	–
North Stafford	–	–	–	–	–	–	275	–	–	–	–	–
North British	–	–	–	–	–	–	–	–	–	–	–	–
North Western (Leeds)	–	–	–	–	–	–	–	–	–	–	–	–
North Devon. *See* South Western.												
North Eastern	–	–	–	–	–	–	–	–	–	1,126	–	–
North London	–	–	–	–	–	–	–	–	–	–	–	–
South Devon	–	–	–	–	–	–	–	–	–	–	–	–
South Durham and Lancashire	–	–	–	–	–	–	–	–	–	–	–	84
South Eastern (small way-leave, unlimited).												
Scottish Central	–	–	–	–	–	–	–	–	–	–	–	–
Ulster	–	–	–	–	–	–	–	–	–	–	–	–
Whitehaven Junction	–	–	–	–	–	–	–	–	–	–	–	–
Manchester, Sheffield, and Lincoln Cheshire Lines; and London and North Western Cheshire Lines	–	–	–	–	–	–	–	–	–	–	–	–

Appendix, No. 7.

PAPERS handed in by Mr. *Scudamore*, 15 July 1868.

GRAPH COMPANIES, and the Number of Years which the Agreements have to run.

te B.—The total length of Line given below somewhat exceeds that under agreement, the length having been taken from "The Times" and "Bradshaw's Itinerary," which in certain cases include Branches on which the Telegraph Companies have no wires.

Years which Agreements have to run.															Years × Mileage of Line.
16.	17.	18.	19.	20.	21.	22.	24.	25.	31.	36.	43.	47.	50.	99.	
MILEAGE OF LINE.															
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,350
–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	750
7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	112
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,609
–	–	–	–	–	–	–	–	–	–	–	–	–	66	–	3,300
–	–	–	–	–	–	–	–	–	–	–	–	–	28	–	1,400
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	260
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	416
–	–	–	–	–	–	–	–	–	–	–	–	–	25	–	1,250
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	119
–	–	–	–	–	–	–	–	–	–	–	–	75	–	–	3,525
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,280
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	700
–	–	–	–	–	–	–	–	–	–	–	–	–	1,365	–	68,250
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,542
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,520
–	–	–	–	–	–	–	–	–	–	–	–	–	–	24	2,376
20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	320
–	–	–	–	–	–	–	–	–	–	246	–	–	–	–	8,856
–	–	–	–	–	–	–	–	–	–	–	–	–	–	503	49,797
–	–	–	–	–	–	–	–	–	–	–	–	–	–	60	5,940
–	60	–	–	–	–	–	–	–	–	–	–	–	–	–	1,020
–	–	–	–	–	–	–	–	–	–	–	5	–	–	–	215
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10,095
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	343
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,224
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	300
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6,088
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	152
–	–	–	–	–	–	–	–	–	–	–	–	–	249	–	12,450
–	–	–	–	–	–	–	–	–	44	–	–	–	–	–	1,364
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,200
–	–	–	–	–	–	–	–	–	–	–	–	–	900	–	45,000
–	–	–	–	–	–	–	–	–	–	–	–	–	–	47	4,653
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12,386
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	165
–	–	–	–	–	–	–	–	–	–	–	–	110	–	–	5,170
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,092
–	–	–	–	–	–	–	–	62	–	–	–	–	–	–	1,550
–	–	–	–	–	–	–	–	–	–	–	–	120	–	–	5,640
–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	990
–	–	–	–	–	–	–	–	–	–	–	–	–	–	say 50	4,950

STATEMENT showing the Mileage of Railways under Agreement with the Telegraph Comp

RAILWAYS.	Years which Agreements have to run.											
	3.	4.	5.	6.	7.	7¼.	8.	9.	10.	11.	12.	13.
	MILEAGE OF LINE.											
Scottish North Eastern	–	–	–	–	–	–	–	–	–	–	–	–
Dumfries, Lochmaben, and Lockerbie	–	–	–	–	–	–	–	–	–	14	–	–
Isle of Wight	–	–	–	–	–	–	–	–	–	–	–	–
Carrickfergus and Larne	–	–	–	–	–	–	–	–	–	–	–	–
Cowes and Newport	–	–	–	–	–	–	–	–	–	–	–	–
Mid-Wales	–	–	–	–	–	–	–	–	–	–	–	–
Cork and Limerick	–	–	–	–	–	–	–	–	–	–	–	–
Much Wenlock	–	–	–	–	–	–	–	–	–	–	4½	–
Cork and Macroom	–	–	–	–	–	–	–	–	–	–	–	–
Somerset and Dorset	–	–	–	–	–	–	–	–	–	–	–	–
Newry, Warrenspoint, and Rostrevor	–	–	–	–	–	–	–	–	–	–	–	–
Brecon and Merthyr	–	–	–	–	–	–	–	–	–	–	–	–
Cambrian	–	–	–	–	–	–	–	–	–	–	–	–
Belfast and County Down	–	–	–	44	–	–	–	–	–	–	–	–
Bradford, Wakefield, and Leeds	–	–	–	18	–	–	–	–	–	–	–	–
Belfast and Northern Counties (Ballymena and Coleraine).	–	–	–	–	–	–	–	–	–	–	–	–
Carlisle and Silloth Bay	12	–	–	–	–	–	–	–	–	–	–	–
Castle Douglas and Dumfries	–	–	–	–	–	–	–	–	–	–	20	–
Cork and Bandon	–	–	–	–	–	–	20	–	–	–	–	–
Cork and Youghal (now included in Great Southern and Western).	–	–	–	–	–	–	–	–	–	–	–	–
Stockton and Darlington, &c. *See* North Eastern.												
Dublin and Belfast Junction	–	–	–	–	–	–	–	–	–	–	63	–
Dublin and Drogheda	–	–	–	–	–	–	–	–	–	–	–	–
Dublin and Wicklow	–	–	–	–	–	–	–	–	–	–	–	–
Dundalk and Enniskillen	–	–	–	–	–	–	–	–	–	65	–	–
East Lancashire	–	–	–	–	93	–	–	–	–	–	–	–
Glasgow and South Western	–	–	249	–	–	–	–	–	–	–	–	–
Great Southern and Western of Ireland	–	–	–	–	–	–	–	–	–	–	–	–
Kirkcudbright	–	–	–	–	–	–	–	–	–	–	13	–
Lancashire and Yorkshire	–	–	–	–	–	–	–	–	–	–	403	–
Limerick and Castle Connell	–	–	–	–	–	–	–	–	14	–	–	–
Limerick and Ennis	–	–	–	24	–	–	–	–	–	–	–	–
Londonderry and Coleraine	–	–	–	–	–	–	–	–	–	–	–	–
Londonderry and Enniskillen	–	–	–	–	–	–	–	–	–	–	–	–
Lough Swilly	–	–	–	–	–	–	–	11	–	–	–	–
Maybole and Girvan	–	–	–	–	–	–	–	–	12	–	–	–
Midland and Great Western	–	–	260	–	–	–	–	–	–	–	–	–
Monaghan and Clones	–	–	–	–	–	–	–	–	–	–	–	8
Monkland	–	–	–	–	–	–	–	–	–	–	–	–
Newry and Armagh	11	–	–	–	–	–	–	–	–	–	–	–
Port Patrick	–	–	–	–	–	–	–	–	–	–	–	62
St. Helen's	–	–	–	–	18	–	–	–	–	–	–	–
Stamford and Essendine	–	–	6	–	–	–	–	–	–	–	–	–
South Yorkshire	–	–	–	–	–	–	–	–	–	–	–	–
Waterford and Limerick	–	–	–	–	–	–	–	–	–	–	–	–
South Eastern (Ireland)	–	–	–	–	–	–	–	–	–	–	–	–
Birkenhead	–	–	–	–	–	–	–	–	–	–	–	–
West Hartlepool	–	–	–	–	–	–	–	–	–	–	–	–
Blyth and Tyne	–	–	–	–	–	–	–	–	–	–	–	–
TOTAL	23	38	1,219	343	177	1,346	1,056	147	919	1,624	503½	206

he Number of Years which the Agreements have to run—*continued.*

Years which Agreements have to run.															Years × Mileage of Line.
16.	17.	18.	19.	20.	21.	22.	24.	25.	31.	36.	43.	47.	50.	99.	
MILEAGE OF LINE.															
–	–	–	–	–	–	78	–	–	–	–	–	–	–	–	1,716
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	154
–	12	–	–	–	–	–	–	–	–	–	–	–	–	–	204
–	–	–	–	–	–	–	–	–	–	–	–	–	14	–	700
–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	85
–	–	–	–	–	–	–	–	–	–	–	–	–	52	–	2,600
–	–	–	–	–	–	–	–	–	–	–	–	–	25	–	1,250
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	54
–	–	–	–	–	–	–	–	–	–	–	–	–	24	–	1,200
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	924
–	–	–	–	–	–	–	8½	–	–	–	–	–	–	–	204
–	–	–	–	–	–	–	–	–	–	–	–	–	73	–	3,650
–	–	–	–	–	–	–	–	–	–	–	–	–	176	–	8,800
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	264
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	108
–	–	–	–	–	85	–	–	–	–	–	–	–	–	–	1,785
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	36
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	240
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	160
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	—
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	756
–	–	–	–	–	–	–	–	–	–	–	–	75	–	–	3,525
–	–	–	–	–	107	–	–	–	–	–	–	–	–	–	2,247*
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	715
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	651
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,245
–	–	–	419	–	–	–	–	–	–	–	–	–	–	–	7,961
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	156
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,836
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	140
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	144
–	–	–	–	–	–	–	–	–	–	–	–	–	–	36	3,564
–	–	–	–	–	–	–	–	–	–	–	–	–	–	60	5,940
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	99
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	120
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,300
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	104
–	–	–	–	–	–	–	–	–	–	–	–	–	–	38	3,762
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	33
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	806
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	126
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	30
–	–	–	–	–	–	–	–	–	–	–	–	–	58	–	2,900
–	–	–	–	–	–	–	–	–	–	–	–	–	–	77	7,623
–	–	–	–	170	–	–	–	–	–	–	–	–	–	–	3,400
–	–	–	–	18	–	–	–	–	–	–	–	–	–	–	360
–	–	18	–	–	–	–	–	–	–	–	–	–	–	–	324
–	–	–	–	22	–	–	–	–	–	–	–	–	–	–	440
27	77	18	419	210	192	78	8½	62	44	246	5	380	3,070	905	360,160

Subject to approval.

STATEMENT showing the MILEAGE of WIRE on RAILWAYS under Agreement with

Note.—When two Companies have Agreements with the same Railway, and the Mileage of

RAILWAYS.	Years which Agreements have to Run.											
	3.	4.	5.	6.	7.	7½.	8.	9.	10.	11.	12.	13.
	MILEAGE OF WIRE.											
Bristol and Exeter	–	–	–	–	–	–	–	–	378	–	–	–
Banbridge and Lisburn	–	–	–	–	–	–	–	–	–	–	–	–
Cork, Blackrock, and Passage	–	–	–	–	–	–	–	–	–	–	–	–
Caledonian	–	–	–	–	–	–	–	–	–	1,487	–	–
Cornwall	–	–	–	–	–	–	–	–	–	–	–	–
Cornwall, West	–	–	–	–	–	–	–	–	–	–	–	–
Colne Valley	–	–	–	–	–	–	–	–	–	–	–	38
Cockermouth and Workington Cockermouth, Keswick, and Penrith	–	–	–	–	–	–	–	–	–	–	–	41
Carmarthen and Cardigan	–	–	–	–	–	–	–	–	–	–	–	–
Deeside	–	–	–	–	31	–	–	–	–	–	–	–
Dublin and Drogheda	–	–	–	–	–	–	–	–	–	–	–	–
Eastern Counties and Norfolk East Suffolk Eastern Union	–	–	–	–	–	–	–	–	5,035	–	–	–
Furness	–	–	–	–	–	–	–	–	–	–	–	–
Great Western	–	–	–	–	–	–	–	–	–	–	–	–
Great Northern of Scotland	–	–	–	280	–	–	–	–	–	–	–	–
Great Northern	–	–	2,834	–	–	–	–	–	–	–	–	–
Great Northern (Dunstable, Luton, and Hertford Branch).	–	–	–	–	–	–	–	–	–	–	–	–
Hull and Hornsea	–	–	–	–	–	–	–	–	–	–	–	–
Highland	–	–	–	–	–	–	–	–	–	–	–	–
London and South Western	–	–	–	–	–	–	–	–	–	–	–	–
London, Brighton, and South Coast	–	–	–	–	–	–	–	–	–	–	–	–
Lancashire and Yorkshire	–	–	–	–	–	–	–	–	–	–	–	–
London and Blackwall	–	–	–	–	–	–	–	–	–	–	–	–
London and North Western	–	–	–	–	–	9,394	–	–	–	–	–	–
London, Tilbury, and Southend	–	–	–	–	112	–	–	–	–	–	–	–
London, Chatham, and Dover *	–	–	–	–	–	–	–	7	–	–	–	–
Llynvi Valley	–	–	–	–	–	–	–	–	23	–	–	–
Midland	–	–	–	–	–	–	3,793	–	–	–	–	–
Maryport and Carlisle	–	56	–	–	–	–	–	–	–	–	–	–
Manchester, Sheffield, and Lincoln	–	–	–	–	–	–	–	–	–	–	–	–
Monmouthshire Railway and Canal	–	–	–	–	–	–	–	–	–	–	–	–
North Stafford	–	–	–	–	–	–	479	–	–	–	–	–
North British †	–	–	–	–	–	–	–	–	–	–	–	–
North Western (Leeds)	–	–	–	–	–	–	–	–	–	–	–	–
North Devon. *See* South Western.												
North Eastern	–	–	–	–	–	–	–	–	–	4,898	–	–
North London	–	–	–	–	–	–	–	–	–	–	–	–
South Devon	–	–	–	–	–	–	–	–	–	–	–	–
South Durham and Lancashire	–	–	–	–	–	–	–	–	–	–	–	134
South Eastern	–	–	–	–	–	–	–	–	–	–	–	–
Scottish Central	–	–	–	–	–	–	–	–	–	–	–	–
Ulster	–	–	–	–	–	–	–	–	–	–	–	–
Whitehaven Junction	–	–	–	–	–	–	–	–	–	–	–	–
Manchester, Sheffield, and Lincoln Cheshire Lines; and London and North-Western Cheshire Lines ‡	–	–	–	–	–	–	–	–	–	–	–	–

* At present the Electric and International Company work over lines, and have rights to erect wires.
† The Electric Telegraph Company have rights for 50 years over the whole system.

EGRAPH COMPANIES, and the Number of Years which the Agreements have to run.

ars to run differ, the mean Mileage of Wire and Length of Term are taken.

Years which Agreements have to Run.															Years × Mileage of Wire.
16.	17.	18.	19.	20.	21.	22.	24.	25.	31.	36.	43.	47.	50.	99.	
MILEAGE OF WIRE.															
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,780
–	–	–	–	–	–	–	–	–	–	–	–	–	45	–	2,250
7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	112
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16,357
–	–	–	–	–	–	–	–	–	–	–	–	–	317	–	15,850
–	–	–	–	–	–	–	–	–	–	–	–	–	83	–	4,150
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	494
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	533
–	–	–	–	–	–	–	–	–	–	–	–	–	35	–	1,750
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	217
–	–	–	–	–	–	–	–	–	–	–	–	110	–	–	5,170
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	50,350
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,004
–	–	–	–	–	–	–	–	–	–	–	–	–	5,435	–	271,750
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,680
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	14,170
–	–	–	–	–	–	–	–	–	–	–	–	–	–	60	5,940
32	–	–	–	–	–	–	–	–	–	–	–	–	–	–	512
–	–	–	–	–	–	–	–	–	–	841	–	–	–	–	30,276
–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,390	335,610
–	–	–	–	–	–	–	–	–	–	–	–	–	–	246	24,354
–	265	–	–	–	–	–	–	–	–	–	–	–	–	–	4,505
–	–	–	–	–	–	–	–	–	–	–	42	–	–	–	1,806
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	70,455
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	784
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	63
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	230
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	30,344
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	224
–	–	–	–	–	–	–	–	–	–	–	–	–	730	–	36,500
–	–	–	–	–	–	–	–	–	129	–	–	–	–	–	3,999
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,832
–	–	–	–	–	–	–	–	–	–	–	–	–	603	–	30,150
–	–	–	–	–	–	–	–	–	–	–	–	–	–	83	8,217
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	53,878
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,205
–	–	–	–	–	–	–	–	–	–	–	–	724	–	–	34,028
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,742
–	–	–	–	–	–	–	–	–	–	–	–	–	–	63	6,237
–	–	–	–	–	–	–	–	405	–	–	–	–	–	–	10,125
–	–	–	–	–	–	–	–	–	–	–	–	392	–	–	18,424
–	–	–	–	–	–	–	–	–	–	–	–	–	–	45	4,455
–	–	–	–	–	–	–	–	–	–	–	–	–	–	152	15,048

‡ The Electric Telegraph Company have rights over the whole of these Cheshire lines, but only 152 miles of wire erected.

STATEMENT showing the Mileage of Wire on Railways under Agreement with

RAILWAYS.	Years which Agreements have to run.											
	3.	4.	5.	6.	7.	7½.	8.	9.	10.	11.	12.	13.
	MILEAGE OF WIRE.											
Scottish North Eastern	–	–	–	–	–	–	–	–	–	–	–	–
Dumfries, Lochmaben, and Lockerbie	–	–	–	–	–	–	–	–	–	73	–	–
Isle of Wight	–	–	–	–	–	–	–	–	–	–	–	–
Carrickfergus and Larne	–	–	–	–	–	–	–	–	–	–	–	–
Cowes and Newport	–	–	–	–	–	–	–	–	–	–	–	–
Mid Wales	–	–	–	–	–	–	–	–	–	–	–	–
Cork and Limerick	–	–	–	–	–	–	–	–	–	–	–	–
Much Wenlock. *See* Midland	–	–	–	–	–	–	–	–	–	–	–	–
Cork and Macroom	–	–	–	–	–	–	–	–	–	–	–	–
Somerset and Dorset	(Message agreement).											
Newry, Warrenspoint, and Rostrevor	–	–	–	–	–	–	–	–	–	–	–	–
Brecon and Merthyr	–	–	–	–	–	–	–	–	–	–	–	–
Cambrian	–	–	–	–	–	–	–	–	–	–	–	–
Belfast and County Down	–	–	–	84	–	–	–	–	–	–	–	–
Bradford, Wakefield, and Leeds	–	–	–	72	–	–	–	–	–	–	–	–
Belfast and Northern Counties and Ballymena and Coleraine.	–	–	–	–	–	–	–	–	–	–	–	–
Carlisle and Silloth Bay	21	–	–	–	–	–	–	–	–	–	–	–
Castle Douglas and Dumfries	–	–	–	–	–	–	–	–	–	–	79	–
Cork and Bandon	–	–	–	–	–	–	40	–	–	–	–	–
Cork and Youghal (now included in Great Southern and Western).	–	–	–	–	–	–	–	–	–	–	–	–
Stockton and Darlington (North Eastern)	–	–	–	–	–	–	–	–	–	–	–	–
Dublin and Belfast Junction	–	–	–	–	–	–	–	–	–	–	321	–
Dublin and Drogheda	–	–	–	–	–	–	–	–	–	–	–	–
Dublin and Wicklow	–	–	–	–	–	–	–	–	–	–	–	–
Dundalk and Enniskillen	–	–	–	–	–	–	–	–	–	85	–	–
East Lancashire	–	–	–	–	434	–	–	–	–	–	–	–
Glasgow and South Western	–	–	878	–	–	–	–	–	–	–	–	–
Great Southern and Western of Ireland	–	–	–	–	–	–	–	–	–	–	–	–
Kirkcudbright	–	–	–	–	–	–	–	–	–	–	13	–
Lancashire and Yorkshire	–	–	–	–	–	–	–	–	–	–	1,957	–
Limerick and Castle Connell	–	–	–	–	–	–	–	–	14	–	–	–
Limerick and Ennis	–	–	–	24	–	–	–	–	–	–	–	–
Londonderry and Coleraine	–	–	–	–	–	–	–	–	–	–	–	–
Londonderry and Enniskillen	–	–	–	–	–	–	–	–	–	–	–	–
Lough Swilly	–	–	–	–	–	–	–	11	–	–	–	–
Maybole and Girvan	–	–	–	–	–	–	–	–	36	–	–	–
Midland and Great Western	–	–	414	–	–	–	–	–	–	–	–	–
Monaghan and Clones	–	–	–	–	–	–	13	–	–	–	–	–
Monkland	–	–	–	–	–	–	–	–	–	–	–	–
Newry and Armagh	11	–	–	–	–	–	–	–	–	–	–	–
Port Patrick	–	–	–	–	–	–	–	–	–	–	–	281
St. Helen's	–	–	–	–	48	–	–	–	–	–	–	–
Stamford and Essendine	–	–	12	–	–	–	–	–	–	–	–	–
South Yorkshire (Manchester, Sheffield, and Lincoln).	–	–	–	–	–	–	–	–	–	–	–	–
Waterford and Limerick	–	–	–	–	–	–	–	–	–	–	–	–
South Eastern (Ireland)	–	–	–	–	–	–	–	–	–	–	–	–
Birkenhead	–	–	–	–	–	–	–	–	–	–	–	–
West Hartlepool	–	–	–	–	–	–	–	–	–	–	–	–
Blyth and Tyne	–	–	–	–	–	–	–	–	–	–	–	–
TOTAL	32	56	4,138	460	625	9,394	4,325	18	5,486	6,543	2,370	494

aph Companies, and the Number of Years which the Agreements have to run—*continued.*

Years which Agreements have to run.															Years × Mileage of Wire.
16.	17.	18.	19.	20.	21.	22.	24.	25.	31.	36.	43.	47.	50.	99.	
MILEAGE OF WIRE.															
–	–	–	–	–	–	363	–	–	–	–	–	–	–	–	7,986
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	803
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	425
–	25	–	–	–	–	–	–	–	–	–	–	–	27	–	1,350
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	153
–	9	–	–	–	–	–	–	–	–	–	–	–	102	–	5,100
–	–	–	–	–	–	–	–	–	–	–	–	–	52	–	2,600
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	—
–	–	–	–	–	–	–	–	–	–	–	–	–	25	–	1,250
–	–	–	–	–	–	–	7	–	–	–	–	–	–	–	168
–	–	–	–	–	–	–	–	–	–	–	–	–	170	–	8,500
–	–	–	–	–	–	–	–	–	–	–	–	–	170	–	8,500
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	504
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	432
–	–	–	–	–	472	–	–	–	–	–	–	–	–	–	9,912
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	63
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	948
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	330
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	—
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	—
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,852
–	–	–	–	–	–	–	–	–	–	–	–	315	–	–	14,805
–	–	–	–	198	–	–	–	–	–	–	–	–	–	–	3,960
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	935
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,038
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,390
–	–	–	1,498	–	–	–	–	–	–	–	–	–	–	–	28,462
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	156
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	23,484
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	140
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	144
–	–	–	–	–	–	–	–	–	–	–	–	–	–	144	14,256
–	–	–	–	–	–	–	–	–	–	–	–	–	–	240	23,760
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	99
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	360
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,070
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	104
–	–	–	–	–	–	–	–	–	–	–	–	–	–	152	15,048
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	33
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,653
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	336
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	60
–	–	–	–	–	–	–	–	–	–	–	–	–	290	–	14,500
–	–	–	–	–	–	–	–	–	–	–	–	–	–	354	35,046
–	–	–	–	1,425	–	–	–	–	–	–	–	–	–	–	28,500
–	–	–	–	18	–	–	–	–	–	–	–	–	–	–	360
–	–	36	–	–	–	–	–	–	–	–	–	–	–	–	648
–	–	–	–	44	–	–	–	–	–	–	–	–	–	–	880
30	299	36	1,498	1,685	472	363	7	405	129	841	42	1,541	8,084	4,929	1,398,653

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SUMMARY.

Term of Agreement.	Miles of Line.	Miles of Wire.
1 to 5 Years - - - -	1,280	4,226
6 to 10 Years - - -	3,988	20,308
11 to 20 Years - - -	3,211½	13,397
21 to 30 Years - - -	340½	1,247
31 to 99 Years - - -	4,650	15,566
TOTAL - - -	13,470	54,744

Average duration of Agreements:—

Per Mile of Line - - - - - - - - 26⅔ Years.

Per Mile of Wire - - - - - - - - 25½ Years.

MINUTES OF PROCEEDIN

OF THE

SELECT COMMITTEE

ON THE

ELECTRIC TELEGRAPHS BI

WITH THE

APPENDIX.

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16 *July* 1868.

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TO THE

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Varying cost of maintenance and repair of the lines of the company, the town lines depreciating much more rapidly than the country lines, *Bright* 2556-2568——Constant outlay upon renewals, the whole of the lines being replaced in twelve or thirteen years, *ib.* 2560-2562. 2569-2571——Very efficient state in which the lines of the company are maintained, otherwise the traffic would fall off, *ib.* 2560. 2623-2627——Gradual increase in the annual cost of maintenance of the land lines of the company, *ib.* 2578-2580.

Increasing traffic of the company both in Ireland and England, the net receipts and the dividends having also largely increased of late years, *Bright* 2590-2600——Important advance since last year in the value of the company's shares, *ib.* 2607-2614——There is no fund for depreciation, the lines being kept up from year to year, *ib.* 2623-2626——Better condition of the lines than when first laid down, *ib.* 2627.

Strong objections urged against the Post Office scheme in the petition by witness's company against the Bill; explanation as to witness not now holding the objections therein expressed, *Bright* 2647-2661. 2683-2685——Statement of the amount of capital of the company with reference to the net receipts and the dividend as the basis of purchase by Government, *ib.* 2662-2669——Satisfactory increase of traffic in 1868 as compared with 1867, *ib.* 2706-2717.

Practice of the company to make their declarations of income tax upon the average of three years' profits, and not upon the dividends, *Bright* 3560-3567——Formation of a reserve fund by the company, there being surplus profits not divided, *ib.* 3568-3572.

Return showing the gross receipts, and the details of expenditure, in each of the years 1865-67, *App.* 29.

Brocklebank, Mr. Circumstance of Mr. Brocklebank, chairman of the Mersey Dock and Harbour Board, having petitioned against the Bill, he being, however, a large holder of telegraph shares, *Patterson* 651-653. 693-696.

C.

Caledonian Railway Company. Arrangement that the Caledonian Company are to be on the same footing as the North British Company on the question of compulsory sale, *Ev.* 243.

Statement as to the compensation clause in regard generally to reversionary interest being taken from the agreement with the Caledonian Company, which company does public business on part of its line, *Scudamore* 3793-3803.

Heads of agreement between the Postmaster General and the Caledonian Railway Company, dated respectively 13th June and 16th July 1868, *Ev.* 20-22; *App.* 52, 53.

Cameron, Dr. (Analysis of his Evidence.)—Is editor and manager of the "North British Daily Mail," 1398, 1399—— Is perfectly satisfied with the rates proposed to be paid to the Post Office by the press for telegraphic news, 1400, 1401——Supplies sundry details in connection with the present charge and the proposed charge for special wires, in the case

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case of Scotch papers; important saving to the press under the Post Office scheme, 1402 *et seq.*——Large use of special newspaper wires under the proposed arrangement, 1416–1420——Considerable balance of profit to Government out of the press payments for special wires, 1418, 1419. 1441–1444.

Opportunity of newspaper proprietors to obtain telegraphic news either by means of an association to be formed for the purpose, or by means of special wires, 1426, 1427. 1436——Willingness of the Post Office to transmit sporting news, but not to collect it, 1428, 1429——Reduced rate at which long speeches (such as that of Mr. Disraeli at Edinburgh) are to be transmitted by the Post Office, 1430–1439——Higher charge than at present in the case of ordinary telegrams for the press, 1440——Doubt as to the necessity for any other agreements, on the part of the press, beyond those to be provided in the Bill, 1447–1449.

Capital of Companies. Total of about two millions and a half as the paid-up capital of the land telegraph companies, *Scudamore* 2128.

Capital (*Purchase of Telegraphs*). See *Cost, &c.*

Chambers of Commerce. Inquiry into the present subject by the Edinburgh Chamber of Commerce in 1865, the matter having also been taken up by almost all the Chambers of Commerce in the kingdom, *Scudamore* 12–14; *Harrison* 351–357——Summary of the reasons put forward by the Chambers of Commerce for advocating the annexation of the telegraphs to the Post Office, *Scudamore* 22——Concurrence of witness, after due inquiry, in the conclusions arrived at by the Chambers of Commerce in favour of the proposed transfer to Government, *ib.* 25——Adoption by the Chambers of Commerce generally of the conclusions of the Edinburgh Chamber, *Harrison* 353–357.

See also *Edinburgh Chamber of Commerce. Liverpool Chamber of Commerce. Manchester Chamber of Commerce.*

Cipher Messages. Discovery by Sir Charles Wheatstone of a system of cipher which may be used by the public as a sure means of secrecy, *Scudamore* 155. 160, 161——Secrecy may be ensured by sending messages in cipher, but ciphers are now very little used, on account of the increased rate charged through the great care necessary, *Sir C. Wheatstone* 1035–1037. 1055——Great difficulties in the way of cipher messages in France, on account of the Government interference; no such difficulty need be apprehended in this country, *ib.* 1051–1054. 1059–1067——Important reduction proposed in the charge for cipher messages, *Scudamore* 3330–3332.

Paper submitted by Sir Charles Wheatstone, explanatory of the facilities invented by him for the dispatch of messages in cipher, *App.* 20–22.

See also *Cryptograph.*

Clark, Latimer. (Analysis of his Evidence.)—Civil Engineer, has paid great attention to electric telegraphy, 1187, 1188——Great obstacles to the interception of messages in transit, with a view to a dishonest discovery of their contents, 1189–1197——Conclusion that there need be no apprehension of collusion of Government officials on the score of the interception of messages by tapping the wires; impracticability of such collusion without discovery, 1195–1218——Denial by the French Government of certain reported supervision over private messages, 1204. 1215.

Very good state in which the plant of the companies is maintained, 1219, 1220. 1223–1226——Great improbability of any inventions in a few years materially affecting the value of the plant, 1221. 1224——Belief that it would be a highly profitable transaction for Government to purchase the present plant, 1222–1224.

Commercial Progress. Importance with reference to the commercial progress of the country of an early adoption of the proposed scheme, *Harrison* 581–584.

See also *Chambers of Commerce.*

Compensation to Officers. Conditions required by the telegraph companies upon the score of compensation to their officers, the Post Office being willing to fall in with such conditions, *Scudamore,* 172, 173——Intention to comprise in the compensation clause any officer of a telegraph company exclusively engaged in telegraph work, though acting jointly for a railway company and telegraph company, *ib.* 3587–3592——Due allowance made by witness in his estimates for a capitalised charge in respect of compensation, *ib.* 3596–3600. 3625–3630——Allowance to be made for the value of the pension carried by Government employment, *ib.* 3610–3612.

Discussion upon the question as to the wording of the provisions relating to the compensation of the companies' officers, *Proceed. Com.* xiii.

See also *Directors.*

Competition. Improbability of private telegraph companies entering into competition with Government by purchasing new patents or inventions, *Culley* 920–926. 936–942——

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Competition—continued.

Great difficulties in the way of any new company competing with the present companies, *Sir C. Wheatstone* 1086-1089——Inability of witness, or of companies, to start any scheme in competition with Government, *Allan* 1573. 1628. 1638-1640. 1712-1728.

Conclusion as to the equitable claim of the companies against Government competition, *Scudamore* 3365-3374. 3480-3489——Evidence in detail in support of the view that the existing companies are practically secure from all competition on the part of new companies, *ib.* 3398 *et seq.*——Particulars as to the length of the agreements between the telegraph and railway companies; obstacles to competition on the cessation of the shorter agreements, or for a period of some twenty years to come, *ib.* 3400-3421. 3447-3452. 3467-3470. 3518-3542——Less unfairness of Government competition if the companies refuse to go to arbitration under the Bill, *ib.* 3472-3476.

Compulsory Sale. Argument that the practical monopoly of the telegraph companies entitles them to be dealt with by Parliament on the principle of compulsory sale, and that they have an equitable claim against Government competition, *Scudamore* 3365-3374. 3480-3489——*See* also *Arbitration.* *North British Railway Company.*

Continent of Europe. See *Foreign Countries.*

Continental Messages. Statement as to witness having omitted from the estimate in 1866 all mention of the continental traffic though producing a net revenue of 45,000 *l.* a year, *Scudamore* 2136-2151——Explanation of the data and figures upon which witness calculated that a sum of 45,000 *l.* was a fair estimate of the surplus receipts from continental traffic, *Foster* 2858-2868. 2883-2889.

Readiness of the Post Office to use its influence abroad for the more accurate transmission of telegrams to this country, *Scudamore* 3289-3293——Way in which a net revenue of 45,000 *l.*, or rather of 49,250 *l.* is estimated for continental or submarine messages, *ib.* 3330-3334.

Cost of Construction. Average of about 24 *l.* per mile as the cost of telegraph posts and wires along railways, the cost by road being higher, *Culley* 960-966——Opinion as to the sufficiency of 4,000,000 *l.* for carrying out *de novo* a complete system all over the country in connection with the Post Office, *Allan* 1730-1733.

Memorandum by an officer of the telegraph companies relative to the cost of construction and maintenance of district telegraph lines in towns, *Scudamore* 1922 ——Expenditure by the companies of about 2,200,000 *l.* in construction; that is, including the costs of patents, Parliamentary expenses, &c., *ib.* 2154. 2183. 2194-2196——Diminution in the cost at which telegraph lines may now be laid down, as compared with their original construction, *ib.* 2155.

Cost (Purchase Money):

Belief that after giving full value for the companies' interests, the Post Office will work the telegraphs at a profit, on account of the large increase of business from a uniform and lower rate, *Harrison* 384-387——Expediency of making the purchase at once; enhanced price to be paid if the matter be postponed, *Harrison* 451. 458. 490. 580, 581; *Culley* 927-930——Rough estimate made by witness of the capital required to purchase the telegraphs; margin of profit after payment of interest on such capital, *Patterson* 636-648——Belief that it would be a highly profitable transaction for Government to purchase the present plant, *Clark* 1222-1224.

Explanation that witness has no estimate to submit of the capital necessary to purchase the interests of the companies, but he shows a net revenue representing more capital than would be required, *Scudamore* 1901-1904——Larger capital required than was formerly estimated by witness, he having since discovered that the trade was more profitable than he had supposed, *ib.* 1904-1908.

Conclusion from the increased information now possessed by witness that the telegraphs are a much more valuable property than he at first believed, and that if not bought this year, they will require an additional half million of purchase-money next year, *Scudamore* 2203, 2204——The companies at first wanted twenty-five years' purchase of prospective profits, *ib.* 2226.

Repetition of opinion that the estimated net revenue will cover any capital that can possibly be wanted, *Scudamore* 2252——Calculation that even if 6,000,000 *l.* were required to purchase all the interests, the net revenue would represent, at 3½ per cent., a much larger capital than this sum, *ib.* 2254-2263.

Possibility of 6,000,000 *l.* being required as purchase-money; this, however, is the maximum estimate, and includes not only the good-will, but several items and properties not comprised in the original estimate of 2,400,000 *l.*, *Scudamore* 2266. 2280-2309. 2327. 2347-2354——Deliberate opinion of witness that 6,000,000 *l.* will amply suffice for purchasing all the interests concerned, *ib.* 2347-2354. 2494-2500.

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Cost (*Purchase Money*)—continued.

Inquiry by witness into Mr. Scudamore's calculation of the purchase-money required; conclusion that 6,000,000 *l.* is an extreme estimate, *Foster* 2830–2832. 2895–2897. 3010–3015——Opinion further expressed that the sum of 6,000,000 *l.* will be ample to purchase all the rights not only of the telegraph companies, but of the railway companies as well, *ib.* 2984 *et seq.*

Offer by the promoters of the Bill to make the basis of purchase the highest price realised on the Stock Exchange up to the 2nd of May, to which would be added the increase usually accorded for compulsory sale; maximum prices realised adverted to hereon, *Scudamore* 3352–3364. 3422–3439. 3543–3549——Conclusion that the net results only will be capitalised after everything has been taken into consideration by the arbitrator, *ib.* 3786–3789.

Rejection by the Committee of a proposal to substitute seventeen years' purchase for twenty years' purchase, *Proceed. Com.* xi.

See also *Amalgamation. Arbitration. Compulsory Sale. Electric and International Telegraph Company. Good Will. Increase of Messages. Inventions and Improvements. Money Bill. North British Railway Company. Profits of Companies. Railway Companies. Revenue and Expenditure. Treasury, The.*

Cryptograph. Explanation of the system of cipher devised by witness by means of the cryptograph, whereby there is very great facility for the transmission of telegraphic messages, without discovery of the contents being possible, *Sir C. W. Wheatstone* 1038–1058——Very successful use of the cryptograph by the police, *ib.* 1039, 1040. 1043, 1044.

Witness has instructed several local heads of the police in the use of the crytograph, for the transmission of cipher messages, there being no difficulty in understanding this instrument, and no instances of messages being divulged, *Kettle* 1163–1186.

Paper handed in by Sir Charles Wheatstone, containing instructions for the employment of the cryptograph, *App.* 20–22.

Culley, Richard Spelman. (Analysis of his Evidence.)—Is engineer in chief to the Electric and International Telegraph Company; has been connected with the Company for twenty-two years, 890, 891. 943–945——Statement showing that there need be no apprehension of messages being intercepted and read by officials in Government offices into which wires are carried, 892–905——Opportunity at present for reading messages in transit; no acts of dishonesty have, however, occurred, nor are they likely to occur under Government administration, 895–905.

Question considered as to the probable effect of new inventions in telegraphy upon the value of the existing system after purchase by Government; slight force attached to any objection on this score to the proposed purchase, 906–935——Improbability of private companies entering into competition with Government, by purchasing new patents or inventions, 920–926. 936–942——Circumstance of a patent having been taken out for working without wires; belief as to its uselessness, 921, 922. 978, 979——Expediency of making the purchase at once; enhanced price to be paid if the matter be postponed, 927–930.

With regard to the statement by witness's company, in answer to the Post-office statement, witness was not consulted upon it, but can testify generally to its correctness, 943–952——Confirmation of the company's statement as to the active steps taken in order to extend telegraphic communication throughout the kingdom, and to have stations at all places where the working expenses could be met, 953–959. 971–973——Average of about 24 *l.* per mile as the cost of telegraph posts and wires along railways, the cost by road being higher, 960–966——Estimate that it would cost about 30 *l.* a mile to extend the telegraph to Wick and other places in the northern parts of Scotland, 968–970. 985.

Accuracy of a certain tabular statement showing the annual extensions of the system of the Electric and International Company since 1850; large increase from year to year, 971–973——Ready adoption by the Company of any improvements, the result being that the system is in a very efficient state, 974–977——Impracticability of ever working at a penny rate by means of a new invention, 978–980——Result of inquiries made by witness's company in 1867, in regard to places now unprovided with telegraph stations; conclusion adverse to extensions, so far as regards the question of profit, 986–995.

Frequent reduction by the company in the rates, the minimum rate being now 1 *s.* and the maximum rate, 2 *s.*, 996–999——Establishment of the United Kingdom Company upon the basis of a uniform 1 *s.* rate, which was not found to pay, 1001–1006——Opinion that a uniform 1 *s.* rate would, after about two years' operation, be remunerative to witness's company, 1007–1017——Probability of there being good

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grounds for the complaint of Government interference with private telegrams in Spain and France; witness does not anticipate similar complaint in this country, 1018-1027.

D.

Delay. Instances of great delay in the transmission of telegrams in towns, this being the fault of the system rather than of the companies or of individuals, *Scudamore* 66-77 —— Delay in the transmission of private messages from railway stations through the clerks or porters having railway business to attend to, *ib.* 80, 81.

Denmark. Very general use of the telegraph in Denmark, *Scudamore* 33.

Deposit and Transmission of Telegrams (*Post Offices*). Arrangement by which the public might deposit their messages in the various post offices or receptacles for letters, that is, by using stamped paper and by a uniform prepayment of 1 *s.*, *Scudamore* 110-115. 119. Average of one place of deposit for every 300 inhabited houses, *ib.* 110, 111——Contemplated forwarding of insufficiently stamped messages, just as letters not prepaid are forwarded, *ib.* 119.

Directors (*Telegraph Companies*). Contemplated exclusion of directors from compensation unless in the case of salaried chairmen or managing directors, *Scudamore* 3593-3595.

Concurrence of the companies in the view that ordinary directors are not to be compensated, *Ev.* 234.

Discounts (*Rates of Transmission*). Discontinuance of the former practice of the telegraph companies to allow discount, *Patterson* 699-702.

Dispatch. Great advantages of the Post Office machinery for facilitating the better dispatch of telegrams: particulars hereon, *Scudamore* 88-113——Illustrations of the saving of time in correspondence by using the post offices for transmitting messages to the nearest telegraphic office, to be forwarded thence to their destination by telegraph, *ib.* 115.

Distant or Remote Places. Special advantage of a uniform 1 *s.* rate in the case of Ireland and of distant places now subject to a rate of 3 *s.*, *Finlay* 1486, 1487. 1507, 1508—— Calculation as to the increase to be caused in the several classes of messages above 1 *s.* by the application of a uniform rate of 1 *s.*; estimated increase from 7,500,000 to 10,612,500 in the aggregate numbers, *Scudamore* 1831-1840——Grounds for expecting a large increase of messages to towns in Ireland and to the highlands of Scotland by reducing the present high rates to 1 *s.*, *ib.* 2094. 2103——Opinion that the increase of messages now charged 2 *s.* will be much greater than is assumed by Mr. Scudamore, *Foster* 3123. 3128——Large increase expected in the telegrams between towns and remote districts. *Scudamore* 3176-3178. 3216-3222.——*See* also *Extension of Telegraph Lines.*

Dividends (*Telegraph Companies*). Varying dividends paid by the companies, the average being much more than 5 per cent., *Scudamore* 2129-2133.

Dock Companies. Intention of giving the dock companies way leaves over the lines *Scudamore* 2446-2448.

E.

Edinburgh. Great improvement in Edinburgh if there were telegraph stations at the several money-order offices, *Harrison* 364-367. 459-464.

Edinburgh Chamber of Commerce. Increase of telegraph rates to and from Edinburgh, &c., in 1865, whilst the work was worse done; consequent complaint on the part of the Edinburgh Chamber of Commerce and of the Philosophical Institution of Edinburgh, *Harrison* 347-350——Inquiry by the Edinburgh Chamber in 1865, and resolutions arrived at in favour of a transfer of the telegraphs to Government; subsequent petitions to Parliament on the subject, *ib.* 351-356 ——Several modes of improvement aimed at in the first petition of Parliament from the Edinburgh Chamber, *ib.* 393-397.

Original suggestions of the Edinburgh Chamber of Commerce further adverted to; adoption by other Chambers of the proposal for inquiry by a Royal Commission, *ib.* 548-556.

Electric and International Telegraph Company:

Communication from the Electric and International Telegraph Company accepting the terms offered by the Post Office, *Scudamore* 173——With regard to the price to be paid to the company, it will rest with the arbitrator to determine the actual amount of net profits; probability of this amount being in excess of witness's published estimates, *ib.* 303-310

With respect to the statement by witness's company, in answer to the Post Office statement, witness was not consulted upon it, but can testify generally to its correctness, *Culley* 943-

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943–952——Confirmation of the company's statement as to the active steps taken in order to extend telegraphic communication throughout the kingdom, and to have stations at all places where the working expenses could be met, *Culley* 953–956. 971–973——Accuracy of a certain tabular statement showing the annual extensions of the system of the company since 1850; large increase from year to year, *ib.* 971–973.

Ready adoption by the company of any improvements, the result being that the system is in a very efficient state, *Culley* 974–977——Inquiries by the company in 1867 relative to further extensions; conclusion adverse thereto, *ib.* 986–995——Frequent reduction by the company in the rates, the minimum rate being now 1 *s.* and the maximum rate 2 *s.*, *ib.* 996–999——Excellent state of repair of the plant of the Electric and International Company, *Clark* 1225——The Electric and International Company does all the business of "Bell's Life," and witness has no cause for any serious complaint against the company, *Merrick* 1535–1543.

Instance in the case of the Electric Telegraph Company of the immense increase of business through the system of 1 *s.* messages, *Scudamore* 1743–1745——Statement as to the company being restricted by Act to a 10 per cent. dividend, with power to make up back dividends to that amount; means of evading this restriction, *ib.* 2228–2245——Justification of twenty years' purchase by Government in the case of the Electric Telegraph Company, *ib.* 2236–2246——Large surplus shown by the company after dividing 10 per cent., *ib.* 2491–2493.

Constant renewal and repair of the land lines of the company from year to year, so that they are at present in a most efficient state, more so probably than when first laid down, *Weaver* 2719–2723. 2751. 2762——Large reserve fund, now amounting to 140,000 *l.*, put by for exceptional accidents to the submarine cables, and for such contingencies as the snow storm of 1866, *ib.* 2724–2731. 2748–2757——Very large mileage of the company, *ib.* 2740——There are about 10,000 miles of line and 50,000 miles of wire, *ib.*——Total of 58 per cent. of revenue expended in working expenses, maintenance, &c., *ib.* 2742, 2743.

Increase of revenue at the rate of about 10 per cent. per annum, there being every reason to expect a similar increase in the present year, *Weaver* 2744–2747——Power of the company to make up back dividends to 10 per cent. *ib.* 2754, 2755——Large proportion of the receipts of the company derived from a small number of their stations, such as London, Liverpool, Manchester, &c., *ib.* 2763–2772.

Estimates (Post Office). See *Arbitration. Amalgamation. Cost (Purchase Money.) Good Will. Money Bill. Profits of Companies. Railway Companies. Revenue and Expenditure. Treasury, The.*

Expenditure. See *Cost (Purchase Money.) Revenue and Expenditure.*

Extension of Telegraph Lines:

Expectation of a much more rapid extension of the telegraph by Government than by the companies, *Harrison* 398–400. 420——Expediency of the telegraph being extended by the Post Office to Wick and various other places in Scotland, even though such particular extensions were not in themselves remunerative, *ib.* 529–547.

Confirmation of the Electric and International Company's statement as to the active steps taken in order to extend telegraphic communication throughout the kingdom, and to have stations at all places where the working expenses could be met, *Culley* 953–959. 971–973——Estimate of 30 *l.* per mile as the cost of extension to various places in Scotland, *ib.* 968–970. 985——Accuracy of a tabular statement showing the annual extensions of the system of the Electric and International Company since 1850; large increase from year to year, *ib.* 971–973——Result of inquiries made by witness's company in 1867 in regard to places now unprovided with telegraph stations; conclusion adverse to extensions as far as regards the question of profit, *ib.* 986–995.

Great public advantage by the Post Office extending the telegraph to places where extension would not pay the companies, *Sir C. Wheatstone* 1104–1111——Information relative to a private line from Glasgow to the Mull of Cantyre, which returns a profit of 3 or 3½ per cent.; inference that lines through similar districts may be made and worked by the Post Office at a fair profit, *ib.* 1106–1111. 1133–1154——Great importance of the extension of communication to outlying districts and remote places, *Allan* 1727. 1738.

Probable cost of 200,000 *l.* in respect of extensions proposed by the Post Office, *Scudamore* 1864——Statement showing that postal communication is now frequently given to unremunerative districts; justification of this course, and of a similar course as regards telegraphic communication, each system being in the aggregate self-supporting, *ib.* 1909–1921——Memorandum by an officer in witness's department, who has had considerable experience of telegraphs, showing the data for the estimate of 200,000 *l.* as the cost of extending and of mounting the present system under the Post Office, *ib.* 1922.

Doubt as to the expediency of a system of private contributions in aid of unremunerative

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extensions by the Post Office, *Scudamore* 2512, 2513—— Loss incurred by the Post Office on letters between England and Ireland, the amount of such loss being gradually diminishing, *ib.* 2515–2522. 2528——Loss also upon letters to the thinly inhabited part of Scotland and Wales, *ib.* 2523–2527.

Causes for the non-extension of the telegraph into remote districts by the companies, such causes not operating in the case of Government extensions, *Bright* 2670–2682—— Accuracy of certain statements in a pamphlet issued by witness's company in opposition to the Post Office scheme, as to there being few, if any, places in Great Britain where it would be remunerative to open new stations, *Weaver* 2773–2787 ——Admission that witness considers the question of extension in connection with the dividends of his company and the interests of the shareholders, and that it would, doubtless, be very desirable if the Post Office were to establish numerous additional stations in the interests of the public, *ib.* 2788–2804.

Consideration of the results shown by the Electric and International Company in regard to unprofitableness of extension to remote districts; argument that, from a Post Office point of view, a very different result will follow from a Government extension to such places at a reduced charge, *Scudamore* 3161–3204. 3222–3233.

F.

Fenian Disturbances. Inconvenience to witness and to the Irish press generally through Government taking possession of the wires at the time of the Fenian rising; witness makes no complaint on this score, *Finlay* 1510. 1518–1522.

Finlay, Francis D. (Analysis of his Evidence.)—Is proprietor of the "Northern Whig" newspaper, published at Belfast, 1450, 1451——Complaint of the present system of supply of telegraphic news to the press, on the ground not only of inefficiency but of expense, and of the despotic manner in which the Companies may and do treat the newspaper, 1452–1457——Very unsuitable character of a large portion of the news for which the newspaper proprietors are obliged to pay, 1455. 1456——Advantage if the press were to supply the news to the Post Office for transmission, 1457.

Illustration in witness's case of the arbitary action of the Magnetic Telegraph Company; this need not be apprehended if the matter rested with the Post Office, 1457–1463. 1523——Obstacle to the use of special wires by the Irish papers, 1464—— Similar information furnished under the present system to all the Belfast papers, 1465–1467——Increased circulation of papers in Ireland owing more to reduction of price than to telegraphic news, 1468–1470 —— Importance of regular and accurate intelligence, whereas this cannot always be secured, 1471–1484. 1488, 1489.

Conclusion as to the great advantage to Belfast and to Ireland generally by a Government administration of the telegraphs at a uniform 1 *s.* rate, 1485–1508——Minimum charge of 3 *s.* now in force between Belfast and London, 1490. 1504, 1505——Approval of certain power in Government to stop the transmission of messages, as in times of political disturbance, 1509–1517——Inconvenience to witness and to the Irish press generally through Government taking possession of the wires at the time of the Fenian rising; witness makes no complaint on this score, 1510. 1518–1522.

Foreign Countries. Representations by the Chambers of Commerce as to the salutary results in foreign countries from the telegraphs being under Government management, *Scudamore* 22——Verification by witness of the proposition that the use of the telegraph is much more general and popular on the Continent than in this country, *ib.* 26–37.

Communication of witness with the Post Offices, or other public authorities in continential countries where the telegraphs are administered by Government, the replies received being at the service of the Committee, *Scudamore* 29–32.

Statement as to the great increase of telegraphic communications in foreign countries consequent upon reductions of rate, *Scudamore* 37–43. 1739–1742——The continental rates include porterage within a limited area as in this country, *ib.* 55——Important advantage of the Continental telegraphs over the English in the offices abroad being carried into the centres of the population, *ib.* 56–66——Numerous precedents out of England for the proposed amalgamation of the telegraphic and postal administrations, *ib.* 121.

Probability of there being good grounds for the complaint of Government interference with private telegrams in Spain and in France; witness does not anticipate similar complaint in this country, *Culley* 1018–1027.

Letters addressed by Mr. Scudamore to the Directors General of Post and Telegraphs in Continental States, dated 23rd April 1868, together with the replies thereto, containing detailed

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detailed information relative to the Government administration of the telegraphs in different countries. *App.* 1–19.

See also *Belgium.* *Continental Messages.* *France.* *Switzerland.*

Foster, M. H., C.B. (Analysis of his Evidence.)—Is principal officer of the Finance Department of the Treasury; has had considerable official experience in Turkey and in India with respect to finance and accounts, 2807–2819——Careful check by witness of the figures upon which Mr. Scudamore has made his computations of the revenue to be derived by the Post Office from the telegraphs; very moderate estimates arrived at by Mr. Scudamore, 2820–2829——Inquiry also by witness into Mr. Scudamore's calculation of the purchase-money required; conclusion that 6,000,000 *l.* is an extreme estimate, 2830–2832. 2895–2897. 3010–3015.

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Highland Railway Company. Petition of this company against the Bill, *Proceed. Com.* iv. Withdrawal of opposition by the Company, as having come to terms with the promoters of the Bill, *ib.* vii.

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Increase of Messages:

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London and North Western Railway Company. Termination in seven or eight years of the existing telegraphic agreement in the case of the London and North Western Company, *Scudamore* 231, 232.

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Memorandum by an officer of the telegraph companies relative to the cost of construction and maintenance of district telegraph lines in towns, *Scudamore* 1922——Amount allowed in witness's first estimate for the maintenance and repair of plant, *ib.* 2126.

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Information relative to the outlay on maintenance and repair by the British and Irish Magnetic Telegraph Company; very good condition of the plant, *Bright* 2556 *et seq.* ——Arrangements by which the better durability of lines or wires passing through towns may be provided for, *ib.* 2628-2637.

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Manchester. Very general feeling among the Manchester merchants in favour of a transfer of the telegraphs to Government, *Turner* 716-719. 731-734. 742-750. 785-789——Strong opinion expressed by members of the Statistical Society at Manchester in favour of the proposed scheme, *Jevons* 804, 805. 819-821. 885-888——Great convenience at Manchester, as compared with the present telegraphic facilities, if there were a station at each money order office, *ib.* 814-818——Large use of domestic telegrams in Manchester if there were numerous stations, and if the charge were reduced to a lower rate than 1 *s.*, *Taylor* 1349-1351.

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"Manchester Guardian" Newspaper. Payment now made by witness's newspaper with reference to the quantity and quality of the news received from the telegraph companies; preference instead of certain proposed arrangements with the Post Office, *Taylor* 1243-1252. 1284-1311. 1352-1354——Increased profits of the "Manchester Guardian" since the reduction of the price to 1 *d.*; similar results anticipated from a reduction of telegraphic rates to 1 *s.* or 6 *d.*, *ib.* 1335-1341.

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tion of compulsory sale, 3640——Use made of the original agreement with the North British Company in Mr. Scudamore's negotiations with the other companies, 3641, 3642——Promise made by Mr. Scudamore in regard to compensation for loss of services of clerks now paid jointly by the company and the electric telegraph companies, 3643.

Grounds upon which the company contend that they should receive the benefit of the terms granted to other companies in regard to compulsory sale, &c.; argument that the special character of the agreement with the company is no bar to this claim, 3644-3688——Repeated alterations made in certain clauses since they were agreed to by the North British Company; decided objection to these clauses as they at present stand, 3645-3654.

Merrick, John. (Analysis of his Evidence.)—Is connected with "Bell's Life," and shows that while great secrecy is required in the telegraphic intelligence of the paper, no case has ever arisen of messages being intercepted or divulged, 1524-1537——The Electric and International Company does all the business of the paper, and witness has no cause for any serious complaint of the company, 1535-1543.

Messengers. Employment, in some cases, of chance messengers; much delay thus arising, *Scudamore* 75. 89.——*See* also *Porterage.*

Meteorological Department (*Board of Trade*). Benefit to be derived by this department from the telegraphs being under the Post Office at a reduced charge, *Scudamore* 3282.

Midland Railway Company. Petition of this company against the Bill, *Proceed. Com.* iv——Arrangement of terms between the company and the Post Office, so that the opposition of the company is withdrawn, *ib.* vi.

Money Bill (*Session of* 1869). Opportunity of the next Parliament, with all the figures before them, to interdict purchase, in which case the present Bill, even if passed, will be inoperative, *Scudamore* 2253——With regard to the power of the shareholders in the companies to withhold their consent from the agreements made by their directors, it is equally in the power of Parliament in 1869 to withhold their consent from the Money Bill of Government, *ib.* 3389-3397. 3453-3466. 3556-3559.

Money Order Offices. Information relative to the numerous money order offices throughout the kingdom, and the great facilities thereby for extending telegraphic communication, *Scudamore* 88, 89. 94-101——Reduced distance to be travelled by messengers, and increased dispatch in transmission, if the wires were taken into the money order offices, *ib.* 94-97——Average of one telegraphic office for every 1,450 inhabited houses, *ib.* 111.

General feeling throughout Scotland as to the importance of telegraphic stations at all the money order offices, *Harrison* 419.

Large increase of stations concurrently with the increase of money order offices, *Scudamore* 2509, 2510——Rule by which the Post Office is guided in giving a money order office to any locality, it being proposed to follow the same rule as regards telegraphic stations, *ib.* 2535-2539——Information relative to the population of places in country districts having money order offices, *ib.* 3265-3277——Contemplated extension in all cases from railway stations to money order offices in adjacent towns, *ib.* 3311-3318.

Money Orders. Increased facility in carrying on the money order system by means of telegraphic offices, *Scudamore* 116-118——Information relative to the vast increase of money order transactions through the facilities offered by the Post Office, *ib.* 1790-1797.

Monopoly. Explanation that the Post Office does not seek for a legal monopoly of the telegraphs, *Scudamore* 122-127——Examination to the effect that the Post Office would not be liable to actions for damages in respect of telegrams, and would have other advantages as competitors with private companies, so that they would have a practical monopoly, if not a legal one, *ib.* 272-302. 340, 341.

Virtual monopoly under the present system, the companies combining to charge uniform prices, so that the rates are kept too high, *Turner* 724, 725. 735-737. 751-763——Approval of Government having a legal monopoly of the system, though on the other hand there would be no chance of any successful competition with the Post Office even in the towns, *Allan* 1583-1602. 1638-1653. 1713-1728. 1734-1737.

Further evidence opposed to Government having a legal monopoly of the telegraphs; though practically there is no chance of competition with the Post Office, *Scudamore* 2463-2480——Grounds for the conclusion that the existing companies possess a practical monopoly, *ib.* 3398 *et seq.*——Practical monopoly of the existing companies, just as Government in their place would have a monopoly, *ib.* 3467-3471. 3496-3517.

Decision of the Committee that it is not desirable that the transmission of messages for the public should become a legal monopoly in the Post Office, *Proceed. Com.* ix.

See also *Competition.*

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N.

National Telegraph Company. Particulars in connection with an attempt by witness to start the National Telegraph Company at a uniform charge of 6*d.* for fifteen words, including the address; his inability to raise capital for the scheme, *Allan* 1573. 1603-1637 ——Explanation as to the extent of telegraphic facilities proposed to be given to the public by the National Telegraph Company at a 6*d.* rate, and for an outlay of 500,000*l.*; much greater facilities under the proposed Government scheme, *ib.* 1608-1628. 1662-1666. 1699-1729.

Newspapers. See *News Rooms. Press, The.*

News Rooms. Objection raised at some of the meetings of the newspaper proprietors to the arrangements proposed as to the supply of news by the Post Office to news rooms, and exchanges in the country, *Taylor* 1312–1319——Explanation of the mode in which it is proposed that public news rooms shall be supplied with news; that is through the agency of the newspapers, *Scudamore* 3303–3310.

Night Telegrams. Frequent difficulty now experienced in getting telegrams sent at night, *Scudamore* 100.

North British Railway Company:

Payment of 50,000*l.* to be made to the North British Railway Company, subject to a verification of the company's figures; neither this amount nor the value of the trade acquired thereby is included in witness's estimates of the cost of purchase generally, *Scudamore* 311-316.

Statement that witness though a director of the North British Railway, had nothing to do with the agreement between that company and the Post Office, and is not cognisant of any memorandum by the manager of the company in which the price suggested to be paid by the Post Office is 100,000*l.*, *Harrison* 465-484. 495-497——Opinion as to the fairness of the conditions in regard to twenty years' purchase, *ib.* 479——Much larger telegraphic business of the North British than of the Caledonian Company, *ib.* 498-501——Gradual extension of telegraphs over the North British system; doubt as to the cost per mile, *ib.* 522–528.

Copy of memorandum by Mr. S. L. Mason, the manager of the company; mention therein of 100,000*l.*, as the sum to be paid to the company for goodwill, *Ev.* 48.

The North British was the first company that completed an agreement with the Post Office upon the telegraph question, *Mason* 3632–3634——Extensive telegraph business carried on by the company since the end of last year, the receipts from the public, which were at first at the rate of only 400*l.* a year, being now at the rate of 3,200*l.* a year, *ib.* 3635–3637.

Basis of the agreement with Mr. Scudamore, that the interests of the company were to be transferred at twenty years' purchase of an income of 2,500*l.* a year; considerable increase of income since this basis was agreed to, *Mason* 3637–3639. 3646–3648——Distinct promise by Mr. Scudamore, when the agreement was being drawn, that the North British should not be in a worse position than the other companies upon the question of compulsory sale, *ib.* 3640——Use made of the original agreement with the North British Company in Mr. Scudamore's negotiations with the other companies, *ib.* 3641, 3642——Promise made by Mr. Scudamore in regard to compensation for loss of services of clerks now paid jointly by the company and the electric telegraph companies, *ib.* 3643.

Grounds upon which the company contend that they should receive the benefit of the terms granted to other companies in regard to compulsory sale, &c.; argument that the special character of the agreement with the company is no bar to this claim, *Mason* 3644–3688——Repeated alterations made in certain clauses since they were agreed to by the North British Company; decided objection to these clauses as they at present stand, *ib.* 3645–3654.

Effect of the agreement between the Company and the Post Office, as regards assignment of way-leaves to the Post Office, *Johnstone* 3690, 3691——Explanation relative to the clauses as adjusted by Mr. Ashurst and witness, by which the case of the Company would have been met without scheduling the agreement, *ib.* 3693-3699——Nature of the alterations subsequently made in the clauses, so that the company was obliged to fall back upon the agreement, *ib.* 3700–3704.

Confirmation of the statement of Mr. Mason, that the North British Company was promised similar advantages to any that might be obtained by other companies, *Johnstone* 3705–3708. 3711——Claim more especially to compulsory sale in respect of all way-leaves; nature of the provisions satisfactory to the company on this score, *ib.* 3714–3729——Claim also to compensation in respect of the loss sustained through the removal of telegraph clerks, *ib.* 3714.

Dissent from statements by Mr. Mason and Mr. Johnstone, in regard to witness having

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North British Railway Company—continued.

ever promised the same terms as to compulsory sale, in the case of the North British Company, as of the other railway companies, *Scudamore* 3730-3735——Statement by witness, long after the agreement with North British Company, that he did not wish that company to be in a worse position than any other company, *ib.* 3732. 3736-3740.

Examination showing that on further consideration witness does not object to the North British Company having provisions as to compulsory sale put into their agreement, *Scudamore* 3741-3762——Admission by witness, that before the completion of the agreement he probably did use the words attributed to him by Mason and Mr. Johnston, *ib.* 3762.

Copy of agreement between the Postmaster General and the North British Railway Company, *Ev.* 19, 20——Further copy of agreement, dated the 16th July 1868, *App.* 50.

North Eastern Railway Company. Agreement between the Postmaster General and this company, dated the 8th July 1868, *App.* 41-43.

O.

Office Hours. See *Attendance at Stations.*

Officers of Companies. See *Compensation to Staff Officers.*

Opposition to Bill. Withdrawal of opposition on the part of various companies, they having come to agreements with the Post Office, *Proceed. Com.* vi-viii.

Statement by counsel for the promoters, that arrangements had been made with all the opponents of the Bill, *Proceed. Com.* viii.

Statement in defence of the course pursued by the Post Office in coming to terms with the opponents of the Bill, *Scudamore* 2331-2346.

P.

Padstow. The cost of a telegraphic message to or from Padstow will be reduced from 18*s.* to 1*s.* under the Post Office scheme, *Scudamore* 1843, 1844.

Patterson, John. (Analysis of his Evidence.)—Is President of the Liverpool Chamber of Commerce, 588——Adoption by the chamber of several petitions to Parliament, and of a memorial to the Board of Trade, with a view to an improved telegraphic system, and a transfer of the administration to Government, 589-614——Conclusion of the chamber in favour of a uniform sixpenny rate, 595-599. 631-635. 704-706——Strong feeling expressed at meetings of the chamber in August 1867 and February 1868, in favour of a transfer of the telegraphs to the Post Office, 603-611——Presentation of two petitions by the chamber in the present Session, with a view to prompt action in the matter, 612-615.

Very general feeling in Liverpool in favour of the present Bill; almost unanimous feeling on the subject on the part of the mercantile and trading community, 615-619. 649-664. 683——Great increase expected in the use of the telegraph if the rates be reduced, 620-626. 688-692——Decided objection to an amalgamation of the telegraph companies, though an amalgamation under Government would not be objectionable, and would economise the working, 627-630. 669-671.

Rough estimate made by witness of the capital required to purchase the telegraphs; margin of profit after payment of interest on such capital, 636-648——Circumstance of Mr. Brocklebank, chairman of the Mersey Dock and Harbour Board, having petitioned against the Bill, he being a large holder of telegraph shares, 651-653. 693-696——With regard to a petition by Mr. Inman against the Bill, it received no local support of any moment, 655-662. 697, 698. 703.

Objection to a higher rate than 1*s.*, even though the system were not at first fully self-supporting, 665-672——Expediency of the rate being uniform, alike for town and country, 673, 674——Little, if any, advantage to the public, through the non-liability of Government to actions, inasmuch as the companies now have a practical immunity, 675-682——Correct and rapid transmission of telegrams from Belgium, 687——Great facility, and increase of transactions, by means of the sample post; expediency of similar facility in the case of the telegraph, 688-692——Discontinuance of the former practice of the telegraph companies to allow discounts, 699-702.

Penny Postage. Large increase of business through the penny postage, whilst there was still a net revenue notwithstanding the reduction; inference therefrom, *Harrison* 486 513-521. 577, 578.——*See* also *Letters.*

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Petitions. List of petitions against the Bill, *Proceed. Com.* iii, iv——Withdrawal of these during the inquiry, *ib.* vi–viii.

Numerous petitions against the Bill at the time of its reference to the Committee, the opposing parties having in the meantime been agreed with; defence of the course pursued by the Post Office in this respect, *Scudamore* 2331–2346.

Plant. See *Inventions and Improvements. Maintenance and Repair of Plant.*

Porterage. Higher charge for porterage in England than on the Continent, as the messengers have further to travel from the offices in England, *Scudamore* 62. 65–71——Large saving of porterage under the proposed system, so that a uniform rate of 1 *s.* would not be dearer than the present nominal rate of 6 *d.*, *ib.* 120.

Post Office (Administration of Telegraphs):

Reference to a certain memorandum prepared in 1861 by Mr. Ricardo, chairman of the Electric and International Telegraph Company in support of the telegraphic communication of the kingdom being placed in the hands of Government, *Scudamore* 3–7——Enunciation some years ago by Mr. Allan, of the principle, that the telegraphic communication of the country should be in the hands of the Post Office, *ib.* 8–10——Official instructions from Lord Stanley of Alderley, in consequence of which witness, very reluctantly, undertook a detailed inquiry into the question whether the electric telegraphs might be beneficially worked by the Post Office, *ib.* 15–24.

Summary of the reasons submitted by the Chamber of Commerce for the annexation of the telegraphs to the Post Office, witness having, after due inquiry, concurred in the conclusions thus arrived at, *Scudamore* 22. 25——Reduction of charge and avoidance of delay, if the telegraphs be administered by the Post Office, *ib.* 63–79. 97——Numerous precedents out of England for the proposed amalgamation of the telegraphic and postal administrations, *Scudamore* 121.

Great advantage of a concentration of the telegraphs under Government, and of a reduction of price, *Turner* 720–723——Increased facility for the correction of defects if Government had the administration, *Turner* 726; *Jevons* 812——Approval of the proposed transfer of the telegraphs to Government, *Jevons* 801–803——Facilities of the Post Office for doing the work better and cheaper than private companies can do it, *ib.* 856–859——Peculiar facilities of the Post Office for an economical administration of the telegraph system, *Sir C. Wheatstone* 1090–1092.

Representation made by witness to Government in 1854, in favour of an administration of the telegraphs by the Post Office; approval of the scheme by Lord Stanley of Alderley, and by Mr. Ricardo, who had been Chairman of the Electric Telegraph Company, *Allan* 1552–1556——Respects in which the Post Office could work more efficiently and economically than private companies, thus rendering competition impracticable, *ib.* 1638–1653. 1713–1728——Advantage to the public in a variety of ways under the Government scheme, *ib.* 1654.

Witness repeats that the Post Office possesses peculiar facilities for administering the telegraphs, *Scudamore* 1922——Importance of the proposed scheme in increasing the efficient administration of the Post Office itself, *ib.* 3278–3282.

See also *Amalgamation. Competition. Cost* (*Purchase Money*). *Extension of Telegraph Lines. Government Control. Money Order Offices. Money Orders. Monopoly. Press, The. Railway Companies. Rates or Charges. Responsibility. Revenue and Expenditure. Savings Banks. Treasury, The.*

Preamble of Bill. Decision of the Committee (10th July) that the petitioners against the Bill having withdrawn from opposition, the preamble be now treated as a public matter, resting with the members of the Committee, *Proceed. Com.* viii.

Declaration (13th July) that the preamble is proved, subject to a certain amendment, *Proceed. Com.* viii.

Press, The:

1. *Opinions of the Provincial Press upon the question of Post Office Administration of the Telegraphs.*
2. *Dissatisfaction expressed with the present arrangements for the Supply of Telegraphic News to the Press.*
3. *Arrangements for the transmission of News by the Post Office: advantages of this Plan.*
4. *Special Wires.*
5. *Rates of Transmission by the Companies and the Post Office, respectively.*

1. *Opinions of the Provincial Press upon the question of Post Office Administration of the Telegraphs:*

Division of opinion amongst the proprietors of provincial newspapers upon the question

Evidence, 1868—*continued.*

PRESS, THE—continued.

1. *Opinions of the Provincial Press, &c.*—continued.

of arrangement with the Post Office; large proportion of the more influential newspapers in favour of accepting the terms proposed, *Taylor* 1253, 1254. 1258 *et seq.*

Attendance of witness at some meetings of newspaper proprietors, in Manchester, when satisfaction was generally expressed with the present Bill, and with the arrangements proposed by the Post Office as regards the press, *Saunders* 1360–1369.

2. *Dissatisfaction expressed with the present arrangements for the Supply of Telegraphic News to the Press:*

Objection to the present system, by which it rests with the telegraph companies to decide upon what is sent, the quality of the news being frequently unsuitable, *Taylor* 1237–1240. 1251, 1252. 1255–1257. 1328–1331——Complaint of the present system of supply of telegraphic news to the press, on the ground not only of inefficiency, but of expense, and of the despotic manner in which the companies may and do treat the newspapers, *Finlay* 1452–1457——Very unsuitable character of a large portion of the news for which the newspaper proprietors are obliged to pay, *ib.* 1455, 1456.

Power of the telegraph companies to act partially and despotically in the supply of news to any paper, whereas under the Post Office management all papers would be treated alike, *Saunders* 1374–1380——Statement as to witness having been made liable by a telegraph company for a debt of his predecessor, failing payment of which news would not have been supplied to him; illegality of this proceeding, *ib.* 1381–1384. 1388–1397.

3. *Arrangements for the transmission of News by the Post Office; advantages of this Plan:*

Explanation of the amended arrangement intended as regards the transmission of news for the press, *Scudamore* 129–134——The Post Office will not collect the news, and will merely act as transmitters, *ib.*

Facility with which news may be collected for the press by means of a co-operative association, so that the Post Office would merely transmit such news, *Taylor* 1233–1238——Conclusion as to the fairness and impartiality to be exercised by the Post Office in the transmission of news for the press, *ib.* 1332——Independence of the press, so far as any control by the Post Office is concerned, *ib.* 1333, 1334——Better supply of news, under the proposed plan, though the press will, probably, have to pay more for it, *Saunders* 1365, 1366——Much more independent position of the press if the administration of the telegraphs rested with the Post Office, *ib.* 1385–1387——Doubt as to the necessity for any other arrangements, on the part of the press, beyond those to be provided in the Bill, *Cameron* 1447–1449.

Advantages if the press were to supply the news to the Post Office for transmission, *Finlay* 1457——Importance of regular and accurate intelligence, whereas this cannot always be secured under the present system, *ib.* 1471–1484. 1488, 1489.

Resolutions adopted at a meeting of proprietors of daily provincial papers, with reference to the formation of an association for the collection and the telegraphic transmission of news, *App.* 23, 24.

Correspondence between the president of the Provincial Newspaper Society and the Post Office, in February and March 1868, with reference to the course to be pursued by the latter on certain points affecting the interests of the press, in the administration of the telegraphs, *App.* 25, 26.

4. *Special Wires:*

Expected large use of special newspaper wires under the proposed arrangement, *Cameron* 1416. 1420——Considerable balance of profit to Government out of the press payments for special wires, *ib.* 1418, 1419. 1441–1444—— Opportunity of newspaper proprietors to obtain telegraphic news, either by means of an association to be formed for the purpose, or by means of special wires, *ib.* 1426, 1427. 1436——Obstacle to the use of special wires by the Irish papers, *Finlay* 1464.

5. *Rates of Transmission by the Companies and the Post Office, respectively:*

Details relative to the probable cost of the new system to the press, as compared with the present system; the total expense may be greater on the new plan, but this will be counterbalanced by the increased facilities under Post Office administration, *Taylor* 1241 *et seq.*——Very high rates now paid by the press for special messages; advantage in this respect under the Post Office scheme, *Saunders* 1370–1373.

Witness is perfectly satisfied with the rates proposed to be paid to the Post Office by the press for telegraphic news, *Cameron* 1400, 1401——Sundry details in connection with the present charge and the proposed charge for special wires, in the case of Scotch papers; important saving to the press under the Post Office scheme, *ib.* 1402 *et seq.*——Reduced rate at which long speeches (such as that of Mr. Disraeli at Edinburgh) are to be transmitted by the Post Office, *ib.* 1430–1439——Higher charge than at present, in the case of ordinary telegrams for the press, *ib.* 1440.

Private

Evidence, 1868—*continued.*

Private or Family Messages. Belief that many more private telegrams would be sent if the contents were not known to the clerks, *Sir C. Wheatstone*, 1035. 1050.

See also *Universal Private Telegraph Company.*

Profits of Companies. High dividends paid by the principal companies, *Scudamore* 2129-2133——Large annual growth of profit as the basis of purchase, irrespectively of any depreciation through wear and tear, *ib.* 2222–2227——Illustration of the gain to the public by purchasing on the basis of present profits, *ib.* 2226, 2227——The annual growth of profit is not less than 10 per cent., *ib.* 2226. 2297——Large surplus shown by the Electric and International Company, after dividing 10 per cent., *ib.* 2491–2493.

Practice of witness's company to make their declarations of income tax upon the average of three years' profits, and not upon dividends, *Bright* 3560–3567.

Amendment proposed that the net profits of the companies shall be calculated on an average of the last three years, *Proceed. Com.* xii——Rejection, by the Committee of the foregoing proposal, *ib.*

Objections to, and withdrawal of, a proposal that the sum to be agreed upon as the net profits shall in no case exceed the amount of income upon which income tax shall have been last declared before the 1st June 1868, *Proceed. Com.* xii.

See also *Cost* (*Purchase Money*).

Prussia. Large increase in the use of the telegraph in Prussia, whenever the rates have been reduced, *Scudamore*, 34——Varying rates in force in Prussia, *ib.* 54.

Official communication, dated Berlin, 1st May 1868, explanatory of the working of the telegraphic system in Prussia, *App.* 2.

Public, The. Great importance of increased facilities of telegraphic communication to the commercial public, and to the whole community, *Scudamore*, 82, 83——Obligation upon the Post Office to consider primarily the interests of the public, whereas companies are bound first to consider the interests of the shareholders, *ib.* 84–86.

See also *Chambers of Commerce.* *Post Office.*

Public Departments. Advantage of Post Office administration of the telegraphs in the interests of the public departments, *Scudamore* 3282.

Purchase of Telegraphs. See *Cost* (*Purchase Money*). *Post Office.*

R.

Railway Companies:

1. *Negotiations between the Post Office and the Railway Companies, resulting eventually in Agreements.*
2. *Intended Continuance of the Connection between the Telegraphs and the Railways.*
3. *Consideration of the Periods of the Agreements between the Telegraph and Railway Companies, in Connection with the Compensation to be paid to the latter for their Reversionary Interests.*
4. *Necessity of Special Agreements between the Post Office and Railway Companies working Telegraphs for the Public; basis of Compensation in these Cases.*
5. *Statistics in Detail relative to the existing Agreements between the Railway and Telegraph Companies, and the Periods unexpired.*
6. *Question as to Government Purchase of the Railways, and the Basis of Purchase.*

1. *Negotiations between the Post Office and the Railway Companies, resulting eventually in Agreements:*

Endeavours of witness, but without success, to obtain from the railway companies a statement of their requirements, and to meet their objections to the Bill, *Scudamore* 187–196——Arrangement proposed as regards existing agreements between the telegraph companies and the railway companies, *ib.* 214–221——Entire readiness of the Post Office to meet the railway companies in a fair spirit, and to come to just and equable terms with them, *ib.* 337-339——Data for concluding that there is nothing in the agreements between the telegraph companies and the railway companies which may not be regulated in the public interest, *Harrison* 388–392.

Heads of arrangement between the Post Office and the railway companies, as a basis of agreement, *Ev.* 57, 58.

Withdrawal of opposition on the part of various railway companies, they having come to terms with the promoters of the Bill, *Proceed. Com.* vi–viii.

Copies of agreements between the Post Office and various railway companies, *App.* 31 *et seq.*

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RAILWAY COMPANIES—continued.

2. *Intended Continuance of the Connection between the Telegraphs and the Railways:*

Desire of the Post Office to maintain the connection between the telegraphs and the railways, unless on the termination of existing leases the Post Office were excluded from the latter; necessity in such cases of exclusion of taking to the roads and laying down new lines at considerable expense, *Scudamore* 222–246.

3. *Consideration of the Periods of the Agreements between the Telegraph and Railway Companies, in Connection with the Compensation to be paid to the latter for their Reversionary Interests:*

Importance of the periods of the leases or agreements between the railway and telegraph companies being duly considered before a purchase of the telegraphs, *Sir C. Wheatstone* 1123–1132.

Explanation that witness does not propose to submit any detailed estimate of the sum to be paid to the railway companies, *Scudamore* 2249–2251——Circumstance of the precise terms of the agreements between the railway and telegraph companies not having been known to witness when the Bill was read a second time, *ib.* 2328–2330. 2355–2358.

Nature of the inquiry by witness into the compensation to be paid to the railway companies; opinion that Mr. Scudamore makes ample allowance on this score, *Foster* 2833–2844——Explanation that witness calculated the existing rights of the telegraph companies at twenty years' purchase, though the latter have not on the average more than ten years' leasehold interest under their agreements with the railway companies, *ib.* 2918–2955.

Examination to the effect that witness made no calculation of the value of the reversionary interest of the railway companies in the telegraphs at the end of ten years or so, nor of certain sums payable to the railways under various heads, *Foster* 2956 *et. seq.*—— Conclusion as to the sufficiency of the margin available for the purchase of way-leaves over the railways, *ib.* 2973–2998. 3013–3028——Further statement as to the data upon which witness checked Mr. Scudamore's figures, so far as related to the railway companies and their interests, *ib.* 2988–3009. 3065–3067.

Average of about twenty-three years and a half as the term of all the agreements; explanation hereon as to witness having put the average at ten years for the calculations of Mr. Foster, *Scudamore* 3403–3406. 3449. 3550–3555——More permanent interest of the railway companies than of the telegraph companies, as the former might possibly turn the latter off their road; practically, however, there need be no fear of competition with the telegraph companies or the Post Office, *ib.* 3773–3775. 3804–3814——Explanation of the clause by which it is provided that the reversionary interests of the companies, after the termination of their agreements with the telegraph companies, shall be valued by arbitration, *ib.* 3790–3814.

Explanation of the effect of clause (E.) in regard to railway companies having generally a claim to compensation, subject to arbitration, in respect of their reversionary interests, *Scudamore* 3815–3821——Inability of the railway companies to claim separately under clauses (D.) and (E.), *ib.* 3823, 3824——Check through the arbitrator upon undue payment being made to the railway companies in respect of way-leaves, as well as of their surrender of the privilege of making future agreements, *ib.* 3839–3846.

Confirmation of Mr. Scudamore's interpretation of the effect of clauses (D.) and (E.) relative to the compensation claims of railway companies, *Blenkinsop* 3826, 3827—— Power of the companies to claim either on the ground that they can renew their agreements or on the ground that they can carry on business themselves; they cannot claim on both grounds, *ib.* 3827-3838——Conclusion as regards payment for way-leaves, that the arbitrator will not give both the value of the way-leaves and compensation under the other clauses as well, *ib.* 3847, 3848.

Amendment of paragraph E. by the Committee with reference to the grounds of claim of the railway companies, *Ev.* 251.

4. *Necessity of Special Agreements between the Post Office and Railway Companies working Telegraphs for the Public; Basis of Compensation in these Cases:*

Respects in which the general clauses are not applicable to the case of companies working telegraphs of their own for the public, *Johnstone* 3709–3713——Consideration of the reasons for the provisions that the railway companies are to have twenty times the amount of the annual increase derived from public telegraphy; reliance to be placed on the arbitrator for taking this advantage into account, *Scudamore* 3773–3785.

5. *Statistics in Detail relative to the existing Agreements between the Railway and Telegraph Companies, and the Periods unexpired:*

Statement showing the mileage of railways under agreement with the telegraph companies, and the number of years which such agreements in each case have to run, *App.* 56–59. 64.

Statement

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RAILWAY COMPANIES—continued.

5. *Statistics in Detail relative to the existing Agreements, &c.*—continued.

Statement of the mileage of wire on railways under agreement with the telegraph companies, and the number of years before the expiration of each agreement, *App.* 60–64.

6. *Question as to Government Purchase of the Railways, and the Basis of Purchase:*

With regard to the Post Office having been favourable to a transfer of the railways to Government, witness considers that such transfer would have been a very good thing for the country if carried out some years ago, *Harrison* 561–564——Reasons why it is not desirable to put railways equally with telegraphs under Government administration, *Jevons* 860–869——Basis of twenty-five years' purchase, in the case of railways, under the Act of 1844, *Scudamore* 2247, 2248——Grounds for concluding that the proposition for twenty-five years' purchase of the telegraphs was not justified by the provisions of the Railway Purchase Act, *ib.* 3344–3351.

See also *North British Railway Company.*

RATES OR CHARGES:

1. *As to the existing Rates for Telegrams.*
2. *As to the Reduced Rate under Post Office Administration.*
3. *As to the Expediency of a Uniform Rate.*

1. *As to the existing Rates for Telegrams:*

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2. *As to the Reduced Rate under Post Office Administration*—continued.

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secrecy is required in the telegraphic intelligence of the paper, no case has ever arisen of messages being intercepted or divulged, *Merrick* 1524–1537.

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Separate Wires. Witness considers it highly desirable in the interests of the public that the telegraph as used by the public should be quite distinct from the wires used for railway purposes, *Sir C. Wheatstone* 1030–1033——Evidence in explanation of certain provisions in the Bill having more especially for their object the entire separation of the Government wires from the railway wires, *Scudamore* 3763–3772.

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South Eastern Railway. Statement as to the South Eastern Company doing commercial telegraphic business on the whole of their line, whilst the British Magnetic Company carry on business over a portion of the line, *Scudamore* 201–211——Omission from the estimate of working expenses of the cost in connection with the South Eastern Railway, the revenue from this source being also excluded from the estimates, *ib.* 2402–2408. 2418–2431——Considerable public business done by the South Eastern Company, with which company an agreement has been made, *ib.* 3779–3781.

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Stanley of Alderley, Lord. Official instructions from Lord Stanley of Alderley in consequence of which witness, very reluctantly, undertook a detailed inquiry into the question whether the electric telegraphs might be beneficially worked by the Post Office, *Scudamore* 15–24——Approval by Lord Stanley of Alderley of the proposition submitted by witness in 1854 for transferring the telegraphs to the Post Office, *Allan* 1556.

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Examination relative to the state of the negotiations between the Post Office and the Submarine Telegraph Companies and Mr. Reuter, *Scudamore* 1923 *et seq.*——Precariousness of submarine telegraph as compared with land lines, *ib.* 1940, 1941, 1996-2001. 2024-2028——Estimate of 10,000 *l.* a year as the cost of maintaining and repairing the two cables to Holland now belonging to the Electric Telegraph Company, *ib.* 1942-1258.

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Copy of agreement between the Postmaster General and the Submarine Telegraph Company between Great Britain and the Continent of Europe, and the Submarine Telegraph Company between France and England, dated the 11th July 1868, *App.* 46, 47.

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Switzerland. Use of the telegraph in Switzerland by all classes equally with the mercantile class, *Scudamore* 35——Practice in Switzerland to carry the telegraph wires, not only into the post offices, but into large hotels, *ib.* 58-61——Much less difference between the postal and telegraph rates in Switzerland than in this country, *ib.* 3260-3264.

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Treasury, The. Communication of witness with Mr. Anderson of the Exchequer before the Bill was brought in, the purchase money then contemplated having been 3,000,000 *l.*, *Scudamore* 2312-2327.

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TO THE

MINUTES OF EVIDENCE

TAKEN BEFORE THE

SELECT COMMITTEE

ON THE

ELECTRIC TELEGRAPHS BILL.

Ordered, by The House of Commons, *to be Printed,*
16 *July* 1868.

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SPECIAL

REPORT

FROM THE

SELECT COMMITTEE

ON THE

LEE RIVER CONSERVANCY BILL.

Ordered, by The House of Commons, *to be Printed,*
28 *May* 1868.

Wednesday, 11*th March* 1868.

LEE River Conservancy Bill read a second time, and *committed* to a Select Committee of ten Members, five to be nominated by the House, and five by the Committee of Selection.

Tuesday, 17*th March* 1868.

COMMITTEE nominated of—

Lord John Hay.	Mr. Alderman Lawrence.
Mr. Ayrton.	Mr. Henry Surtees.
Mr. Benyon.	

Ordered, THAT the Committee have power to send for Persons, Papers, and Records.

Ordered, THAT Five be the Quorum of the Committee.

Ordered, THAT all Petitions relating to the Lee River Conservancy Bill be referred to the Select Committee on the Bill, and that such of the Petitioners as pray to be heard by themselves, their Counsel, or Agents, be heard upon their Petitions, if they think fit, and Counsel heard in favour of the Bill against the said Petitions.

Ordered, THAT the Second Report of the Rivers Pollution Commissioners (River Lee), presented upon the 30th day of April 1867, and the Evidence thereon; the Report by Captain Tyler on the East London Waterworks Company, presented upon the 31st day of May 1867; and the Report and Proceedings of the Committee on the East London Water Bills, &c., laid upon the Table upon the 27th day of June 1867, be referred to the Select Committee on the Bill.

Thursday, 19*th March* 1868.

Ordered, THAT the parties appearing before the Select Committee on the Lee River Conservancy Bill have leave to print the Minutes of the Evidence taken before the Committee day by day, from the Committee Clerk's Copy, if they think fit.

Friday, 20*th March* 1868.

MEMBERS added by the Committee of Selection—

Sir George Bowyer.	Mr. R. B. Sheridan.
Mr. Maxwell.	Mr. Wise.
Mr. Powell.	

Thursday, 28*th May* 1868.

LEAVE given to the Select Committee to make a Special Report.

SPECIAL REPORT.

THE SELECT COMMITTEE on the LEE RIVER CONSERVANCY BILL have agreed to the following SPECIAL REPORT:

THAT they recommend to the consideration of the Lords Commissioners of Her Majesty's Treasury the expediency of authorising the Public Works Loan Commissioners to advance to the Board of Conservancy constituted by the Bill, such funds as may be necessary to pay off the existing debenture debts of the Trustees of the Lee and the Stort Navigation.

28 *May* 1868.

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REPORT

FROM THE

SELECT COMMITTEE

ON THE

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Ordered, by The House of Commons, *to be Printed,*
28 *May* 1868.

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SELECT COMMITTEE

ON THE

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WITH THE

PROCEEDINGS OF THE COMMITTEE.

Ordered, by The House of Commons, *to be Printed,*
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PROCEEDINGS OF THE COMMITTEE.

Wednesday, 25th March 1868.

MEMBERS PRESENT:

Mr. Surtees.	Mr. Ayrton.
Mr. Sheridan.	Mr. Maxwell.
Lord John Hay.	Mr. Powell.
Mr. Alderman Lawrence.	Mr. Benyon.
Sir George Bowyer.	

Mr. AYRTON was called to the Chair.

The Committeee deliberated.

The Committee decided that they would not expect to hear additional evidence on the subject of the Reports referred to the Committee, and that further information would be required, of which notice would be given to the parties concerned.

Parties called in, and informed thereof.

[Adjourned to Thursday, 23rd April, at Twelve o'clock.

Thursday, 23rd April 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Surtees.	Mr. R. B. Sheridan.
Lord John Hay.	Mr. Benyon.
Mr. Maxwell.	Mr. Wise.
Mr. Alderman Lawrence.	Mr. Powell.
Sir George Bowyer.	

Counsel for the Bill:—Mr. *Davison*, Q.C., and Mr. *Wilkinson*.

Agents:—Messrs. *Dyson & Co.* and Messrs. *Wyatt & Metcalfe*.

Petitions against the Bill were read from—

Henry Birkbeck and others.

Counsel:—Mr. *Vernon Harcourt* and Mr. *Bidder*.
Agent:—Mr. *James Wheeler*.

Metropolitan Board of Works.

Agent:—Mr. *Shrubsole*.

John Shaw Leigh.

Counsel:—Hon. *E. Stanhope*.
Agents:—Messrs. *Dorington & Co.*

Governor and Company of New River.

Counsel:—Mr. *Hope Scott*, Q.C., Mr. *Denison*, Q.C., and Hon. *E. Ashley*.
Agents:—Messrs. *Dorington & Co.*

Local Board of Health for Tottenham.

Counsel:—Mr. *Michael*.
Agents:—Messrs. *Fearon, Clabon, & Fearon*.

East London Waterworks.

Counsel:—Mr. *Hope Scott*, Q.C., and Mr. *John Clark*.
Agents:—Messrs. *Bircham & Co.*

Trustees of the River Lee.

Counsel:—Mr. *Rodwell*, Q.C., and Mr. *Pember*.
Agents:—Messrs. *Marchant & Paed*.

Honourable William Henry John North.

Counsel:—Hon. *E. Stanhope*.
Agents:—Messrs. *Dorington & Co.*

Edward Cook and Others.

Counsel:—Mr. *Littler*.
Agent:—Mr. *Shrubsole*.

Owners of Land near River Lee.

Counsel:—Mr. *Cripps*, Q.C.
Agents:—Messrs. *Marchant & Paed*.

Local Board of Health for Waltham Holy Cross.

Counsel:—Mr. *J. J. Johnson*, Q.C., and Mr. *Round*.
Agent:—Mr. *H. Cruse*.

Robert Lawrence and Others.

Counsel:—Mr. *Littler*.
Agents:—Messrs. *Field & Co.*

Ware Local Board.

Counsel:—Mr. *J. J. Johnson*, Q.C., and Mr. *Round*.
Agents:—Messrs. *Cruse & Co.*

Bishops Stortford Local Board.

Counsel:—Mr. *J. J. Johnson*, Q.C., and Mr. *Round*.
Agents:—Messrs. *Cruse & Co.*

Cheshunt:

Counsel:—Mr. *J. J. Johnson*, Q.C., and Mr. *Round*.
Agent:—Mr. *H. Cruise*.

Corporation of Hertford.

Counsel:—Hon. *E. Stanhope*.
Agents:—Messrs. *Baxter, Rose & Norton*.

Regent's Canal Company.

Agents:—Messrs. *Ellis & Ellis*.

West Ham Local Board of Health.

Agent:—Mr. *Charles Wilson*.

John Meeson and Others.

Agents:—Messrs. *Charles Wilson & Sons*.

William Parker:

Agent:—Mr. *William Parker*.

Luton Local Board of Health:

Counsel:—Mr. *Sargood*.
Agent:—Mr. *Thomas Sismey*.

Mr. *Davison*, on behalf of the Promoters, opened the case in support of the Bill.

Mr. *Cripps*, Mr. *Round*, Mr. *Denison*, Mr. *Bidder*, Mr. *Pember*, Mr. *Littler*, Mr. *Stanhope*, Mr. *Sargood*, and Mr. *Wilson*, were severally heard to state what they considered the most convenient course for conducting the several cases in opposition to the Bill.

Room

Room cleared.—The Committee deliberated.

The Committee determined that the most convenient course would be, that the parties appearing to oppose the Bill should be heard upon the clauses affecting their several interests.

Parties called in, and informed thereof.

[Adjourned to To-morrow, at Twelve o'clock.

Friday, 24th April 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Maxwell.	Mr. R. B. Sheridan.
Mr. Powell.	Mr. Alderman Lawrence.
Mr. Surtees.	Lord John Hay.
Mr. Wise.	Sir George Bowyer.

Mr. *Cripps*, Mr. *Littler*, and Mr. *Michael*, were heard upon the decision of the Committee respecting the course of proceeding.

Room cleared.—The Committee deliberated.

The Committee determined that the parties opposing the Bill should be asked whether, having reference to the decision of the Committee yesterday, any of them wished to be heard against the Preamble of the Bill.

Parties called in.

Mr. *Denison*, Mr. *Cripps*, Mr. *Littler*, Mr. *Round*, and Mr. *Sargood*, were heard to assent to the determination of the Committee.

Question, "That the Preamble of the Bill is proved,"—put, and *agreed to*.

Mr. *Thomas Rawlinson*, C.E., and Captain *Tyler*, R.E., were severally examined.

[Adjourned to Monday next, at Twelve o'clock.

Monday, 27th April 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Alderman Lawrence.	Mr. Surtees.
Mr. Benyon.	Mr. Wise.
Mr. Powell.	Lord John Hay.
Mr. R. B. Sheridan.	Sir George Bowyer.
Mr. Maxwell.	

Captain *Tyler*, R.E., further examined.

Professor *John Thomas Way* examined.

Mr. *Wilson* was heard in support of the Petition of West Ham Local Board.

Mr. *Lewis Angell* examined.

Mr. *Pember* was heard in support of the Petition of the Trustees of the River Lee.

Mr. *John Marchant*, jun., examined.

[Adjourned to Wednesday next, at Twelve o'clock.

Wednesday, 29*th April* 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Benyon.	Mr. Powell.
Mr. Surtees.	Sir George Bowyer.
Mr. R. B. Sheridan.	Lord John Hay.
Mr. Wise.	Mr. Alderman Lawrence.

A Petition from the Marquess of Salisbury was read.
Agent:—Mr. *Coates*.

An amended Petition from the Luton Local Board of Health was also read.

Mr. *Pember* was heard in support of the Petition of the Lee River Trustees with respect to the constitution of the new Conservancy Board.

Mr. *Littler* was heard in support of the Petition of Robert Lawrence and Others.

Mr. *Round* was also heard in support of the Petition of the Local Board of Waltham.

Mr. *Denison* was heard in support of the Petition of the New River Company.

Mr. *Michael* was heard in support of the Local Board of Tottenham.

Mr. *Alfred Manser*, Mr. *Richard Hunt*, Mr. *Benjamin Wicks*, and Mr. *George Webster*, were severally examined.

Mr. *Sargood* was heard in support of the Petition from Luton Local Board.

Mr. *Bidder*, for the Stort Navigation.

Room cleared.—The Committee deliberated.

Clause 6.—Amendments made.

Amendment proposed, at the end of the clause, to add the words, "One by the heads of the local authorities of the places mentioned in Schedule A. to this Act"—(*Mr. Surtees*). —Question put, "That these words be added to the clause."—The Committee divided:

Ayes, 6.	Noe, 1.
Mr. Surtees.	Sir George Bowyer.
Lord John Hay.	
Mr. Sheridan.	
Mr. Wise.	
Mr. Benyon.	
Mr. Powell.	

Words added.—Clause 6, as amended, *agreed to*.

Parties called in, and informed of the decision of the Committee.

[Adjourned to To-morrow, at Twelve o'clock.

Thursday, 30*th April* 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Benyon.	Mr. Wise.
Mr. R. B. Sheridan.	Mr. Surtees.
Mr. Powell.	Sir George Bowyer.
Lord John Hay.	Mr. Alderman Lawrence.

Mr. *Thomas Rawlinson*, C.E., examined.

On behalf of the Petition of the Luton Local Board, Mr. *Thomas Bailey*, Mr. *William David*

David Sandoe, Mr. *Evan Owen Williams*, and Dr. *Edward Woakes*, were severally examined.

Mr. *Sargood* was heard in support of the Petition of the Luton Local Board.

Mr. *Stanhope* was heard in support of the Petition of the Corporation of Hertford.

Professor *John Thomas Way*, examined.

[Adjourned to Monday next, at Twelve o'clock.

Monday, 4th May 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Benyon.	Mr. Maxwell.
Mr. Surtees.	Mr. Powell.
Mr. Alderman Lawrence.	Lord John Hay.
Mr. R. B. Sheridan.	Sir George Bowyer.

Room cleared.—Committee deliberated.

Manuscript clauses considered for the protection of the townships of Luton, Hertford, Tottenham, and West Ham.

Parties called in.

New clause for the "Qualification of Electors" brought up, and read a first time, as follows:—

"The qualification of electors of representatives of landowners shall be regulated as follows, namely:—

"1. Every person who at the passing of this Act was a trustee of the Lee Navigation shall be an elector for life;

"2. Every person who was *ex officio* a trustee at the passing of this Act, and his successor in office, except the Lord Mayor and Aldermen of the City of London, the Recorder of the City of London, the Mayor of the Borough of Hertford, the Governor, Deputy Governor, and Treasurer of the New River Company, and the Member representing in Parliament the City of Rochester;

"3. Any person being in his own right or in right of his wife, in the actual possession or in the receipt or enjoyment of the rents and profits of lands, in which he is entitled to an estate of inheritance, or freehold of the rateable annual value of one hundred pounds or upwards, such lands abutting in some part thereof on the Lee, or on the towing-path thereof, or on any river or stream specifically named in this Act as a tributary of the Lee."

Clause read the second time, and amended.

Amendment proposed, in line 4, to leave out the words, "Except the Lord Mayor and Aldermen of the City of London"—(Mr. *Lawrence*).—Question, "That the words proposed to be left out stand part of the clause"—put, and *agreed to*.

Clause further amended, and *agreed to*.

Mr. *Cripps* was heard on behalf of the Petition of Owners near the River Lee.

Mr. *Davison* was heard to propose a postponement of the further inquiry on this Bill.

Mr. *Trethewin* and Earl *Cowper*, were severally examined.

[Adjourned to Thursday next, at Twelve o'clock.

Thursday, 7th May 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Benyon.	Mr. H. E. Surtees.
Mr. Powell.	Mr. R. B. Sheridan.
Lord John Hay.	Mr. Maxwell.
Sir George Bowyer.	Mr. Wise.
Mr. Alderman Lawrence.	

A Petition from William Thomas Strange Mare, against the Bill (presented 4th May), read.

Agents:—Messrs. *Sherwood, Grubbe, Pritt,* & *Cameron.*

A Petition from Conservators of the River Thames against the Bill (presented 6th May) read.

Agents:—Messrs. *Wyatt* & *Metcalfe.*

Postponed Clause 62.—Mr. *Davison,* on behalf of the Promoters of the Bill, applied to the Committee for a re-consideration of the determination of the Committee respecting the Local Boards affected by the Bill.

Room cleared.—Committee deliberated.

Motion made, "That the Committee will re-consider their conclusion of the 4th May, with regard to Hertford and Luton, when the provisions relating to those towns are submitted for the determination of the Committee"—(Mr. *Powell*).—Amendment proposed, to leave out the words, "with regard to Hertford and Luton"—(Sir *George Bowyer*).—Question put, "That the words proposed to be left out stand part of the Question."—The Committee divided:

Ayes, 5.	Noes, 4.
Mr. Surtees.	Mr. Maxwell.
Lord John Hay.	Mr. Alderman Lawrence.
Mr. Sheridan.	Mr. Powell.
Mr. Benyon.	Sir George Bowyer.
Mr. Wise.	

Main Question put, and *agreed to.*

Resolved, "That the Committee will re-consider the conclusion of the 4th May, with regard to Hertford and Luton, when the provisions relating to those towns are submitted for the determination of the Committee."

Parties called in, and informed of the resolution of the Committee.

[Adjourned to Monday next, at Twelve o'clock.

Monday, 11th May 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Powell.	Mr. Alderman Lawrence.
Mr. Benyon.	Mr. Wise.
Mr. Surtees.	Sir George Bowyer.
Mr. Maxwell.	

New clause respecting the constitution of the Water Protection Committee (30 A), brought up, and read a first time, as follows:—"Two of the conservators, representatives of trustees, or landholders, one of the conservators, representatives of the New River Company, one of the conservators,

conservators, representatives of the East London Waterworks Company (from time to time respectively nominated by those respective representatives), the conservator appointed by the Mayor, Aldermen and Commons of the City of London, and the conservator appointed by the Metropolitan Board of Works, shall constitute a standing committee of the Conservancy Board, to be called the Purity of Water Committee, and the discretionary powers of the Conservancy Board in relation to the preservation and maintenance of the purity of water, and the prevention of the flow or passage of sewage or other offensive or injurious matter, shall not be exercised otherwise than on and in accordance with the recommendation of that committee."—Clause read a second time, and amended.

Room cleared.—The Committee deliberated.

Amendment proposed, to leave out all the words after the word "Committee," in line 7, in order to add the words "For the purpose of considering and reporting to the Conservancy Board the measures necessary and proper to be taken in the exercise of the powers and functions of the Board in relation to the preservation of the purity of the water of the Lee and its tributaries, and to the prevention of the fouling thereof. And so often as the Conservancy Board shall fail to carry into effect the measures which shall from time to time be recommended by the Water Protection Committee for the preservation of purity and prevention of fouling, it shall be lawful for the Board of Trade, on the application of the Committee, and after hearing them and the Conservancy Board, to make such order in the premises as to them shall seem fit, and their order shall be binding and carried into effect accordingly" —(Mr. *Powell*) instead thereof.—Question, "That the words proposed to be left out stand part of the clause,"—put, and *negatived.*

Question put, "That these words be there added."—The Committee divided:

Ayes, 4.	Noes, 3.
Mr. Maxwell.	Mr. Surtees.
Mr. Wise.	Mr. Alderman Lawrence.
Mr. Powell.	Sir George Bowyer.
Mr. Benyon.	

Question put, "That the clause, as amended, be added to the Bill."—The Committee divided:

Ayes, 3.	Noes, 4.
Mr. Wise.	Mr. Surtees.
Mr. Powell.	Mr. Maxwell.
Mr. Benyon.	Mr. Alderman Lawrence.
	Sir George Bowyer.

Parties called in, and informed of the decision of the Committee.

On Schedule No. 1:—On behalf of the Trustees of the River Lee, Mr. *John Glass* and Mr. *Nathaniel Beardmore* were severally examined.

On behalf of the Petition of Robert Lawrence and others, Mr. *Henry Brown* was examined.

Mr. *Littler*, on behalf of the above Petition, was heard against the Schedule.

[Adjourned to Thursday next, at Twelve o'clock.

Thursday, 14*th May* 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Benyon.	Lord John Hay.
Mr. Powell.	Mr. Alderman Lawrence.
Mr. Maxwell.	Mr. Wise.
Mr. Surtees.	Sir George Bowyer.

In support of the Petition of Meeson and others, against the tolls proposed in Schedule 2, Mr. *John Meeson* was examined.

Mr. *Rodwell*, on behalf of the Trustees of the River Lee, was heard in support of the proposed tolls.

Schedule 2, amended, and *agreed to*.

Schedules 3 and 4, amended, and *agreed to*.

Mr. *Cripps*, on behalf of the Metropolitan Board of Works, proposed a clause.

Mr. *Parkes* proposed a clause on behalf of the Promoters.

Room cleared.—The Committee deliberated.

The Committee decided to hear the Trustees of the River Lee against the proposed clauses, if they wished to be heard.

Parties called in, and and informed of the decision of the Committee.

Mr. *Pember* was heard on behalf of the Trustees of the River Lee.

The Committee agreed on amendment of the clauses proposed, and added them to the Bill.

Mr. *Michael* proposed a clause on behalf of the Local Board of Health for Tottenham.

Mr. *Parkes* proposed a clause in lieu thereof.

Mr. *Wyatt* applied to be heard on behalf of the Conservators of the Thames.

Room cleared.—The Committee deliberated.

Resolved, "That the Thames Conservators be heard upon the clause."

Resolved, "That the River Lee Trustees be heard upon this clause."

Parties called in.

Mr. *Pember* was heard on behalf of the River Lee Trustees, and called Mr. *Nathaniel Beardmore*.

Room cleared.—The Committee deliberated.

The Committee decided that no evidence should be heard on the clause.

Parties called in, and informed of the decision of the Committee.

Mr. *Wyatt*, on behalf of the Conservators of the Thames, called Mr. *Henry Reason*, who was examined.

Room cleared.—The Committee deliberated.

The Committee decided not to hear further the evidence tendered by Mr. *Wyatt* on this clause.

Parties called in, and informed of the decision of the Committee.

Mr. *Wyatt* was heard against the clause.

Room cleared.—The Committee deliberated.

A Clause proposed by Mr. *Michael*, read a first and second time, and amended.

Question put, "That the clause, as amended, be added to the Bill."—The Committee divided:

Ayes, 5.	Noe, 1.
Mr. Surtees.	Sir George Bowyer.
Lord John Hay.	
Mr. Wise.	
Mr. Powell.	
Mr. Benyon.	

Parties called in and informed thereof.

[Adjourned to To-morrow, at Twelve o'clock.

Friday, 15*th May* 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Powell.	Mr. Maxwell.
Mr. Surtees.	Mr. Wise.
Mr. Benyon.	Lord John Hay.
Mr. Alderman Lawrence.	

Postponed clauses amended, and *agreed to.*

Mr. *Stanhope*, on behalf of the Petition from Hertford, was heard to propose a clause.

Professor *John Thomas Way* examined.

Upon a question being put to the witness respecting Luton, Mr. *Sargood* objected to evidence being given on Luton whilst the case of Hertford was being considered.

Room cleared.—Committee deliberated.

Motion made, and Question put, "That the Promoters, and the Petitioners from Luton and Hertford, the New River Company, and East London Water Company, shall be at liberty to produce evidence respecting the clauses to be submitted to the Committee"—(Mr. *Powell*).—The Committee divided:

Ayes, 5.	Noes, 3.
Mr. Maxwell.	Mr. Surtees.
Mr. Alderman Lawrence.	Lord John Hay.
Sir George Bowyer.	Mr. Wise.
Mr. Benyon.	
Mr. Powell.	

Parties called in, and informed of the decision of the Committee.

On behalf of the Petition from Luton, Mr. *Owen Williams*, Mr. *William David Sandoe*, and Mr. *John Higgins*, were severally examined.

On behalf of the Promoters, Mr. *John Thomas Way* was examined.

[Adjourned to Wednesday next, at Twelve o'clock.

Wednesday, 20*th May* 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Powell.	Mr. Alderman Lawrence.
Mr. Benyon.	Sir George Bowyer.
Mr. Surtees.	Lord John Hay.

Mr. *John Thomas Way* further examined.

Mr. *Henry Reason*, Mr. *Joseph Chuck*, Mr. *James Collyer*, Mr. *Alfred Manser*, Mr. *Nathaniel Cobham*, Mr. *Thomas Rawlinson*, and Mr. *William H. Lucas*, were severally examined.

On behalf of the Petitioners from Luton, Professor *Alfred Swaine Taylor* was examined.

Mr. *Denison* was heard in support of the Petition of the Trustees of the River Lee.

Room cleared.—The Committee deliberated.

The Committee decided that all petitioners affected by the sewage of Luton and Hertford should be heard before the Committee decide upon the Petitions from Luton and Hertford.

[Adjourned to Tuesday next, at Eleven o'clock.

Tuesday, 26th May 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Benyon.	Mr. Surtees.
Mr. Powell.	Mr. Alderman Lawrence.
Sir George Bowyer.	Mr. Wise.
Lord John Hay.	

In support of the Petition from Luton, Mr. *William Sandoe* and Dr. *Alfred Swaine Taylor* were severally examined.

On behalf of the Trustees of the River Lee, Mr. *James Muir* and Mr. *Richard Ellicombe* were severally examined.

Mr. *Denison* was heard on behalf of the Trustees of the River Lee.

Mr. *Hope Scott* was heard on behalf of the East London Water Company.

Mr. *Stanhope* was heard on behalf of the Corporation of Hertford.

Mr. *Sargood* was heard on behalf of the Luton Local Board of Health.

Mr. *Davison* was heard to reply on behalf of the Promoters.

The Room cleared.—Committee deliberated.

Clause proposed on behalf of the Local Board of Luton, read a first and second time, and amended.

Question put, "That this clause, as amended, be added to the Bill."—The Committee divided:

Ayes, 4.	Noes, 2.
Mr. Surtees.	Mr. Alderman Lawrence.
Mr. Wise.	Sir George Bowyer.
Mr. Powell.	
Mr. Benyon.	

With regard to Hertford, *Resolved*, "That unless the New River Company agree to the following arrangement, and insert clauses accordingly, viz., for transferring absolutely to the town of Hertford all the sewage works under the Act of 1854, and for paying in perpetuity an annual sum of 600*l.* a year to the town, and for repealing Clauses 8 and 9 of the Act of 1854, and for placing all the future responsibility of whatever works or processes may be necessary for dealing with the sewage of Hertford in that town; the Committee will pass a clause, enacting that whatever charge or liability may arise from the exercise of any power of the Board of Conservancy over the outfall of the Mainfold Ditch, under the Bill, shall be borne by the New River Company."

Parties called in, and informed of the decision of the Committee.

[Adjourned to Thursday, at Twelve o'clock.

Thursday, 28th May 1868.

MEMBERS PRESENT:

Mr. AYRTON in the Chair.

Mr. Powell.	Lord John Hay.
Mr. Benyon.	Mr. Alderman Lawrence.
Mr. Surtees.	Sir George Bowyer.
Mr Wise.	

Mr. *Hope Scott* was heard to propose the following clause:—"Notwithstanding anything in the Act contained, all sewage or other offensive or injurious matter which may from time to time arise in or flow or pass from any land, house, or building within the district of the Luton Local Board of Health, which is not at the passing of this Act connected with the present sewerage and drainage works of that Board shall be considered sewage or offensive or injurious matter within the general provisions of this Act, and it shall

shall not be lawful under the special exemption last hereinbefore contained to discharge the same into the River Lee."

Room cleared.—The Committee deliberated.

Question put, "That this clause be added to the Bill."—The Committee divided:

Ayes, 2.	Noes, 2.
Mr. Powell.	Mr. Surtees.
Mr. Benyon.	Mr. Wise.

Whereupon the Chairman declared himself with the Noes.

Parties called in, and informed thereof.

Mr. *Charles Henry Parkes* and Mr. *John Marchant* were severally examined.

Postponed Clause 88 read.

Room cleared.—The Committee deliberated.

Motion made, and Question put, "That the blank be filled up with the words 'one thousand pounds'"—(Mr. *Benyon*).—The Committee divided:

Ayes, 3.	Noes, 3.
Sir George Bowyer.	Mr. Surtees.
Mr. Powell.	Mr. Alderman Lawrence.
Mr. Benyon.	Mr. Wise.

Whereupon the Chairman declared himself with the Ayes.

Clause, as amended, *agreed to.*

Several new clauses added.

Resolved, "That the Chairman do move for leave to make a Special Report."

Special Report read and agreed to as follows:

"That they recommend to the consideration of the Lords Commissioners of Her Majesty's Treasury the expediency of authorizing the Public Works Loan Commissioners to advance to the Board of Conservancy constituted by the Bill, such funds as may be necessary to pay off the existing debenture debts of the trustees of the Lee and Stort Navigation."

Question, "That the Bill, as amended, be reported to the House."—put, and *agreed to.*

Parties called in and informed thereof.

Ordered, To Report.

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MINUTES OF EVIDENCE.

Thursday, 23rd April 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Maxwell.
Mr. Benyon.	Mr. Powell.
Sir George Bowyer.	Mr. Sheridan.
Lord John Hay.	Mr. Surtees.
Mr. Alderman Lawrence.	Mr. Wise.

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

23 April 1868.

The Petition for the Bill was read.

Mr. *Davison* and Mr. *Wilkinson* appeared as Counsel in support of the Bill.

Messrs. *Dyson & Co.*, and Messrs. *Wyatt & Metcalfe*, appeared as Agents.

The following Petitions against the Bill were read :—

The Petition of Henry Birkbeck and others.

Mr. *Vernon Harcourt* and Mr. *Bidder* appeared as Counsel for the Petitioners.

Messrs. *Danes & Whale* appeared as Agents.

The Petition of John Shaw Leigh.

The Hon. *E. Stanhope* appeared as Counsel for the Petitioner.

Messrs. *Dorrington & Co.* appeared as Agents.

The Petition of the Metropolitan Board of Works.

Mr. *Shrubsole* appeared as Agent.

The Petition of the Governor and Company of the New River.

Mr. *Hope Scott*, Mr. *Denison*, and Mr. *Ashley* appeared as Counsel.

Messrs. *Dorrington & Co.* appeared as Agents.

The Petition of the Local Board of Health for the district of Tottenham.

Mr. *Michael* appeared as Counsel.

Messrs. *Fearon & Clabon* appeared as Agents.

The Petition of the East London Waterworks Company.

Mr. *Hope Scott* and Mr. *Clerk* appeared as Counsel.

Messrs. *Bircham & Co.* appeared as Agents.

The Petition of the Hon. William Henry John North.

Messrs. *Dorrington & Co.* appeared as Agents.

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The Petition of Edward Cook and Others.
Mr. *Shrubsole* appeared as Agent.

The Petition of the Trustees of the River Lee.
Mr. *Rodwell* and Mr. *Pember* appeared as Counsel.
Messrs. *Marchant & Pead* appeared as Agents.

The Petition of Owners of Land near the River Lee.
Mr. *Cripps* appeared as Counsel.
Messrs. *Marchant & Pead* appeared as Agents.

The Petition of the Local Board of Health of Waltham Holy Cross.
Mr. *Johnson* and Mr. *Round* appeared as Counsel.
Messrs. *H. Cruse & Co.* appeared as Agents.

The Petition of Robert Laurence and Others.
Mr. *Littler* appeared as Counsel.
Messrs. *Field & Co.* appeared as Agents.

The Petition of the Ware Local Board.
Mr. *Johnson* and Mr. *Round* appeared as Counsel.
Messrs. *H. Cruse & Co.* appeared as Agents.

The Petition of the Bishop Stortford Local Board.
Mr. *Johnson* and Mr. *Round* appeared as Counsel.
Messrs. *H. Cruse & Co.* appeared as Agents.

The Petition of the Inhabitants of Cheshunt.
Mr. *Johnson* and Mr. *Round* appeared as Counsel.
Messrs. *H. Cruse & Co.* appeared as Agents.

The Petition of the Corporation of Hertford.
Messrs. *Baxter, Rose, & Norton* appeared as Agents.

The Petition of the Regents Canal Company.
Messrs. *Ellis & Ellis* appeared as Agents.

The Petition of the West Ham Local Board of Health.
Messrs. *Charles Wilson & Sons* appeared as Agents.

The Petition of John Meeson and Others.
Messrs. *Charles Wilson & Sons* appeared as Agents.

The Petition of William Parker.
Mr. *William Parker* appeared as Agent.

The Petition of the Luton Local Board of Health.
Mr. *Sargood* appeared as Counsel.
Mr. *Thomas Sismey* appeared as Agent.

Mr. *Davison* was heard to open the case on behalf of the Promoters of the Bill.

The *Chairman* having asked the respective Counsel for the opponents whether they appeared against the Preamble—

A discussion ensued.

The Committee-room was cleared.

After some time, the Counsel and parties were called in, and informed by the Chairman, that the Committee having regard to the very distinct purposes of many of the provisions of the Bill, thought that it would be more conclusive to a clear and satisfactory determination of the questions that would be brought before them, if the Counsel could, consistently with what they considered their duty to their clients, direct their opposition to clauses. If they thought it necessary that they should be heard upon the Preamble, of course it was the duty of the Committee to hear them; but the Committee did not think that latter course so desirable as the former. If the former course were adopted, in disposing of the Preamble, it would be understood

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stood that the clauses were open for consideration, as they related to the interests of each party. Unless a desire were expressed on the part of the Counsel to bring forward all their evidence on the Preamble, and to state all their case upon the Preamble, the Committee would take the course of dealing with the Preamble, and then hearing the Counsel as the cases arose one after the other.

Several of the Counsel for the opponents stated that they would be able to state to-morrow what course they would be prepared to take with respect to appearing against the Preamble.

At the suggestion of Mr. *Davison*, that groups of clauses affecting particular Petitioners, should be taken separately,

The *Chairman* intimated that the Committee would take from Clauses 1 to 29 to-morrow, if the Counsel for the opponents did not then object to that course.

Friday, 24th April 1868.

MEMBERS PRESENT.

Mr. Ayrton.	Mr. Powell.
Sir George Bowyer.	Mr. Sheridan.
Lord John Hay.	Mr. Surtees.
Mr. Alderman Lawrence.	Mr. Wise.
Mr. Maxwell.	

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

Thomas Rawlinson, Esq., C.E.; Examined by Mr. *Wilkinson*.

T. Rawlinson, Esq., C.E.

24 April 1868.

1. YOU are Chief Inspector of the Local Government Act Office, I believe?—I am.

2. And you are also Chairman of the Committee which sat to inquire into the best means for preventing the pollution of rivers?—I was Chairman of the River Pollution Commission.

3. As Chairman you signed and sent in the report which is now before the Committee?—Just so.

4. Has anything occurred since the presentation of that report to alter the views which you there state, and the recommendations which are therein made?—No.

5. You have examined carefully, I believe, the whole of the valley of the Lee?—Yes.

6. What is termed the "water-shed" of the Lee?—Yes, the water-shed of the Lee.

Mr. *Wilkinson*.] I presume in conducting the examination of Mr. Rawlinson I had better confine myself to Clause 3 at present.

Chairman.] I think so; put the report in his hand.

7. Mr. *Wilkinson* (to the *Witness*).] You tell me that you adhered to the recommendations made in your report. I find the first of those recommendations is this, that the charge of the entire watershed of the River Lee be vested in a Conservancy Board consisting of 15 members, to be appointed as mentioned in your report. I now propose to direct your attention to the part of that recommendation in which you recommend that the charge of the entire water-shed of the River Lee be vested in the Conservancy Board?—Yes.

8. Now, in the Thames Conservancy Act that is not the case, I think; the limits of the Commissioners of the Conservancy Board are as to the Thames itself and its tributaries within three miles?—Yes, that is so.

9. Will you state to the Committee why, in the present case, you think it desirable to include the entire water-shed of the Lee, without such a limit as you introduced in the case of the Thames Conservancy Board?—In the Thames, the River Commissioners had only time to make inquiry as to the pollutions upon the main stream of the Thames, and the same Session the Board of Trade had a Bill before Parliament to transfer the conservancy of the upper Thames to the lower, in fact to consolidate the conservancy, and we were obliged to confine our recommendation to the Thames proper, having had no time to make inquiries into the tributaries, but it was our purpose, after we had made inquiries into the more important districts of Yorkshire and Lancashire, to make a general recommendation, which would embrace not only the main stream, but all the tributaries. In the case of the Aire and Calder we had made such a recommendation, and we should have been prepared to have recommended that the Thames Conservancy Board should have jurisdiction over the entire water-shed of the Thames, but that the tributaries should be under a sub-district, subject, upon certain points, to the main Conservancy Board; but the River Lee being so small an area, and being in fact a sub-district of the Thames, we considered that the jurisdiction might be under one body for the entire area of the River Lee. I may say that we are firmly convinced that no governing power in the water-shed will be complete, which has not jurisdiction over the entire area.

10. That

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10. That remark applies as well to the Thames as to the Lee?—Every river in England, or in Great Britain.

11. I see in one part of your report, page 25, you say that "The Conservators should be furnished with complete powers. In addition to maintaining the navigable channel, and managing the traffic of the navigation, they should be responsible for the due observance, throughout the water-shed, of statutory prohibitions against the pollution of water which can reach the river." Now, without the entire control of the water-shed, it would be impossible to fulfil that obligation?—It would be entirely impossible; but we contemplate much more. We contemplate, with the general Conservancy Board, that landowners and the local authorities, and all others situated upon that area, shall have, through the Conservancy Board, the means of getting the power necessary for bettering their condition; the landowners for the main outfall drainage, and towns, and villages for the means of applying their sewage, or for combining them together where isolation would not be advisable, to enable them to combine together. Now, for instance, on the Thames, at this moment, there are large areas on both sides of the Thames almost every winter flooded most injuriously, destroying property to a far greater extent than the interest of the money necessary to put that property into a beneficial condition, and lowering the health of the surrounding district. Upon the Lee, just the same; there are large areas, many thousands of acres, on the River Lee, which, although it is so close to London, are literally a swamp, because there is no general jurisdiction, nothing whatever to drain or pass boundaries, and do the necessary works for drainage, and we imagine that the Conservancy Board may be armed with such powers, under certain conditions, as to facilitate that plan of operation.

12. So far as regards the necessity of including the entire watershed, it would be greater in the Lee than in the Thames, would it not, on account of the relative proportions between the areas of the water supply?—If ever the word "exceptional" can be used to a drainage area, it may be most righteously applied to the Lee. You are supplying from that area the largest population in London; you are supplying from that area of the valley of the Lee, which is 500 square miles, a moiety of the population of the Metropolis, upwards of one million and a-half.

13. The area of the Thames is what, as against the area of the Lee?—The area of the Thames, I believe, in round numbers, is about 5,000 acres, and the area of the Lee 500 acres.

14. And you supply from both, the same; you supply half the Metropolis, and the other supply half the Metropolis?—There is a moiety of the population supplied by the Thames, and a moiety supplied by the Lee.

15. Are you aware that last Session the East London Waterworks obtained power for an additional supply from the Thames; that would rather disturb those proportions, would it not?—The Thames has a larger volume; they have got power to take, I believe, 5 millions per diem from the Thames, and to bring it into the Eastern District.

16. That would hardly be appreciable, would it?—No; the minimum volume of the Thames is about 300 million gallons per day.

17. You have considered the Bill now before the Committee; the third clause runs in this way, "For the purposes of this Act the Lee shall be taken to be the River Lee from its rise in the county of Bedford, to its junction with the Thames in the county of Middlesex," at Barking Iron Bridge?—Yes.

18. Have you the large map before you?—Yes, I have got the map here.

19. At any rate, that is the point at which the Conservancy of the Thames proper begins?—Yes.

20. As agreed between ourselves?—Yes.

21. Now, from its commencement near Bedford, you first come to Luton, do not you; you commence at Luton, I think?—Yes, that is the River Lee proper. The stream that bears the name of the Lee up to its source is that which rises in Bedfordshire.

22. That may be taken to be the commencement of the Lee for the purposes of this jurisdiction?—Yes; it rises in some springs a few miles above Luton.

23. Then it passes by Withampstead?—Yes.

24. And by Hatfield?—Yes.

25. By Hertford?—Yes.

26. By Ware?—Yes.

27. And

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27. And so in the course indicated by this map until it joins the Thames at the point indicated before?—Yes, at Blackwall.

28. In your report you have divided that river into three districts; the upper district, the middle district, and the lower district?—Yes.

29. For convenience of reference, of course; now in the upper district, commencing with Luton, we find there the town of Luton itself, with a population of 15,320, is that so?—I believe that the population is more, but if you have it in figures there it will be right.

30. Numbering now upwards of 20,000 inhabitants?—Yes, upwards of 20,000 inhabitants.

Chairman.] You need not go over anything that is in the Report.

Mr. *Wilkinson.*] I did not know how far it might be desirable to show the necessity of extending the watershed.

Chairman.] No; what we want to know is, as to the tributaries, namely, "The Stort, the Mimram, Beane, Rib, Quin, Ash, Pincey Brook, Cobbin's Brook, Turkey Street Brook, Edmonton Brook, Salmon Brook, and Moselle, and all streams flowing mediately or immediately into the Lee, or into any of the rivers or brooks."

Mr. *Wilkinson.*] I am coming to that.

31. To the *Witness.*] I understand you to say generally, that so far as the main course of the River Lee is concerned, which you have already described, you think it necessary that that should be included within the jurisdiction of the Conservancy?—I do.

32. Now, a question about the tributaries; the tributaries as stated in this section are, first, the Stort?—Yes.

33. Have you that before you on the plan?—I have got it described here; you will find them tabulated at page 8 in the Commissioners' Report.

34. Then I will take them in the order in which there are there; "The tributaries north of the Lee are the Mimram, the Beane, the Rib, Quin, and the Ash?"—Yes, and the population is given there, and the number of mills.

35. Do you consider it important that each of those tributaries should be included within the jurisdiction of the Conservancy?—I do.

36. Now the tributaries east of the Lee are the Stort, Pincy Brook, and Cobbins Brook, the positions of which you have indicated?—Yes.

37. The tributaries west of the Lee are Turkey Street Brook, Salmon Brook, and Moselle; does the same remark apply to all those tributaries as you have mentioned with regard to the others?—I do.

38. Would you also include all streams flowing mediately or immediately into the river, or into any of those rivers or brooks?—I would include the entire drainage area of the water-shed, as mapped out here.

39. That would, of course, include any streams flowing mediately or immediately into those tributaries?—Yes.

40. Now, in your judgment, would it be possible to carry out the objects of the Bill without extending the jurisdiction of the Conservancy in the manner you have indicated?—It would be quite impossible, because pollutions of various kinds might be set up on any of those streams short of the water-shed boundary, and a means of polluting might set up which would be without the control and jurisdiction of the Conservancy Board. We cannot tell where towns and villages may start up.

41. Those would render nugatory, would they not, the cleansing and freedom from pollution of the main river itself?—In my opinion it would, and make the conservancy imperfect.

Cross-examined by Mr. *Hope Scott.*

42. The three last brooks or streams named in Clause 3 are the Edmonton Brook, the Salmon Brook, and the Moselle?—The Turkey Street Brook, it is called here.

43. Have you got the Bill; I am speaking now of the three last?—Which clause?

44. Clause 3, page 2?—Yes.

45. I believe that no one of those three brooks now runs directly into the Lee?—Do you mean into the River Lee proper?

46. Yes?—I do not remember; but I think they necessarily must run into the

the River Lee, either above or below the point of intake, because there is no outlet but the Lee for the whole of that water.

47. But I ask whether any one of those three brooks runs immediately into the Lee; do not they all run into the intercepting works of the East London Company, and so reach the Lee?—I believe so; there are certain intercepting works.

48. Those intercepting works are what you refer to, I think, at page 12 of the Report: "At the foot of Tottenham Lock is the outfall of Catchwater Dyke." On the large plan you find the works of the East London Company from Tottenham up to Scotland Green, a solid dark line; it is not on your map?—We have taken the intake of the East London Waterworks Company.

49. But you have not given their catchwater upon that map?—

Mr. *Wilkinson.*] It is on the large map.

50. Mr. *Hope Scott.*] "At the foot of Tottenham Lock is the outfall of Catchwater Dyke, an open ditch which the East London Waterworks Company, under their Act of 1853, have constructed to intercept the sewage of the towns on the west of the Lee for some miles above the reservoirs of the company, and to discharge it below. From this single outlet the Lee receives the sewage of Enfield, Edmonton, Hornsey, Chipping Barnet, East Barnet, and Hadley, in its original condition unmitigated by any process except so far as it has undergone oxidation in its course along the open ditch. The outlet itself is very offensive in summer. Now it is into that, is not it, that these three last brooks discharge? The names of those brooks clearly are not on the large map, though they are on the small one?—Yes.

51. But they are, in fact, Edmonton Brook, the Salmon Brook, and the Moselle?—Yes.

52. Do not you think it desirable to put it beyond doubt that that catchwater drain as well as the brooks that discharge into it, should be brought into the jurisdiction of the Conservancy?—Most unquestionably.

Cross-examined by Mr. *Cripps.*

53. Those last questions directed your attention to the intercepting drains. Do you know that they have been formed in the lower part of the Lee by the East London Waterworks Company?—Yes.

54. The East London Waterworks Company being the parties who are peculiarly interested in the purity of the water at that point?—Just so.

55. Does it appear to you to be a fair principle that the cost of intercepting works, if they are required for purifying the river, should be borne in some way by those who have an interest in having the river particularly pure?—It would depend upon all the contingencies. I think the water companies may fairly be called upon to contribute an equitable portion towards any of these intercepting sewers; but I do not think you could call upon the water companies to intercept the whole of the sewage of the entire water-shed.

56. It is a question of degree; but for whose special benefit would it be, or how have these proceedings come about; is it not the water companies, for whose special benefit this matter has been going on?—No; for instance, we are now discussing the question of the River Lee and its pollution, but river pollution is so obnoxious throughout the whole length and breadth of the country that the Government thought it right to institute a river pollution Commission, and that inquiry was to be as wide as the kingdom.

57. Was not the origin of that as regards the Lee, the impurity or the supposed impurity of the water supplied by the East London Waterworks Company, from the Lee?—No; I, as chairman of the River Pollution Commission, can answer that question, that we were not sent authoritatively by the Government especially to the Lee, but we took it in our own judgment; we took the Thames as the most important river in the kingdom, and then we took the Lee as the next important as supplying a moiety of the metropolis.

58. Why did you take the Lee as the next most important; was it not because it supplied London with water?—It was because it supplied a moiety of the population.

59. That is to say, because it was used by the East London Waterworks Company?—Yes; and to a far greater extent than any other water in the empire.

60. And that circumstance made you particularly direct your attention to that river?—Yes; that and the fact of its being in the Thames area.

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61. In other words, being used for consumption in London?—Yes; and following upon our first report which was upon the Thames area.

62. So much for the lower part of the Lee: of course, as we know at present, the trustees' power extends up to Hertford, and when you leave Hertford and go from Hertford on to the further source, it passes through an entirely agricultural district, does not it?—It passes through the towns and villages marked upon the map; the more important ones are marked, but there are many other villages.

63. How many miles do you go above Hertford, before you come to any village of importance?—I have not carried those facts in my head and I do not know; but we have given all the population tabulated.

64. The population may be at one particular point, if you cannot tell me there is an end of it; how much of the flow of the Lee is there above Hertford, where you say that it passes through a purely agricultural country?—I cannot tell you; I can only say that there is, in round numbers, about 150 miles of river and tributaries under no jurisdiction.

65. You cannot tell me the other question?—No, I cannot.

66. Have you any idea about how far water would be freeing from any impurity, flowing through an agricultural district, before it flowed itself pure, so to say?—I may have an idea, certainly, but I could not give you any reliable data, and neither can any one else.

67. Just let me read an answer given by Doctor Letheby, and ask if you agree in that: "There is do doubt that the present system of discharging the sewage of towns into rivers is a very improper system, although the water has a very wonderfull power of self-purification when it is exposed freely to the atmosphere over a run of seven or eight miles. Take, for instance, common sewage going into 20 times its bulk of good river water, in the course of a run of seven or eight miles it becomes so purified that nothing of sewage can be discovered in it by chemical means, and such water may be used, under ordinary circumstances, for domestic supply for years and years without any injurious effect being perceived." Do you agree in that?—No; I do not.

68. I am not going to decide where doctors differ; but your answer is, that you do not agree with that?—Certainly not; I do not deny the fact, if it is a fact, but I do not agree that you shall go on polluting a river because a chemist tells me that, after a few miles, he cannot find anything impure in that water.

69. That is not the question; I ask you whether you agree in that?—No; I do not.

70. With a view of testing that matter, I suppose you have not inquired how much run over and freely exposed to the atmosphere, through an agricultural country, the Lee has, above Hertford, before it gets to Hertford?—No.

71. In your opinion, would not that be an important circumstance to take into consideration in a case of this kind?—I think that it should not be of such importance as to exclude the jurisdiction of the Conservancy Board over the area; because, if they have nothing to mend, there is no interference to take place; and if there is anything to mend, then they have power to follow it and amend it; if you do no injury you cannot be interfered with, I assume.

72. We will see how that is when we get to other Clauses of the Bill. You think the same things are necessary through that agricultural district as are necessary through large towns?—I beg your pardon; I do not say so.

73. The same principle?—I say they should have the same power; but, having the power, and the thing being necessary, are two distinct things.

74. I do not know whether you have read this particular Bill; but I cannot go into the powers founded upon it now; we will come to that hereafter. Let me ask you this: have you formed any idea, or turned your attention at all to the difference in expense that would be caused to individuals of intercepting works, or getting rid of the sewage of towns, or of small villages. Would it not be very much more expensive, in proportion, to the occupiers or the owners of property in small villages?—Every place must be judged upon its own condition and its own merits; you cannot make a model that will fit all towns. I cannot lay you down a rule that would be applicable to all places.

75. I am not asking you to do that?—You are asking me whether it would not be more or less expensive; it might be, or it might not.

76. Of course I do not allude to any special or particular case; but, in a general way, would it not be obviously more expensive, and press more upon the owners of property and the occupiers of property in small villages than large towns?—There are very few men who have had so wide an experience as I have had

had in examining these places, and my impression is this. Of course I cannot go into all the details of it; but my impression is this, that there is not a village in England, or a town in England, that may not deal with its own sewage, so as not to be offensive to the inhabitants of either a village or town, and yet that it shall not make the water impure. That is my opinion.

77. That being your opinion, if that is so, that it is possible to be done, would it not, generally speaking, be done at a much greater expense to the individuals of a small community than of a larger one?—That would depend entirely upon the conditions in which they were situate. If it were a small district, and a purely agricultural district, it could get land easier to put its sewage upon; and it may get rid of it in that way, and very probably at no cost to itself. Many large towns, I can unhesitatingly say, if they either adopt the right means or are forced into them, may get rid of their sewage with even a benefit to themselves.

78. I am not asking you about large towns; if you cannot answer it I will not press it?—It is impossible I can tell you; I do not hold that you should force all villages to sewer and drain, it may be quite impracticable to do that, but you may force all villages, and you may force single houses to cease polluting a stream which is subsequently used for domestic purposes.

79. That is, by substituting some other process to the one which they have ordinarily used?—You may use the dry closet, which is so much lauded, and there may be other means of course; there is no hardship, if a man's house is situated over a stream or a tributary to a water supply, in telling him that he must cease to pollute the water and use dry closets.

80. That is limiting it to one particular class—water-closets?—Or find any other way by which he should cease to pollute the stream.

81. In making any works or drains for the purpose of getting rid of the sewage, the cost would be influenced not only by the number of persons draining into it, but by the configuration of the country and the soil of the country, and my various other circumstances?—Yes, and by the straggling character of the villages; there are hundreds of villages where it would be perfectly absurd to apply the same rule to them in treating them for sanitary conditions as you would apply to a town; that would be perfectly ridiculous; a village could not bear it, but that does not exclude it from doing the next best thing.

Cross-examined by Mr. *Pember*.

82. One question upon that catch-water drain. That was brought under your notice during your inquiry, was not it?—Yes.

83. Are you aware that that was ordered to be made under the East London Waterworks Act, 1853?—I do not remember.

84. Do you know at whose expense it was made?—I do not; I daresay it is stated in the Report; I suppose it would be made by the East London Company.

85. At whose expense has it been hitherto maintained?—I assume by them.

86. When, therefore, you suggest that it would be well that this catch-water drain should form part and parcel of the area to be under the jurisdiction of the new conservancy, do you also mean to transfer the maintenance of the catch-water drain to the Board of the new conservancy?—Most unquestionably.

87. And why?—Because if they take possession and use it for any additional purposes, if it is available, they should reasonably rate the persons who use it, and so relieve the East London of that cost.

88. So far as the cost is additional?—Yes.

89. That is to say, the additional cost should be made a charge upon the causes producing the additional use?—Yes.

90. But not further?—Yes; that is what I mean.

Cross-examined by Mr. *Round*.

91. Was this Bill submitted to you before it was brought in?—The Bill was submitted to me when I was requested by the Board of Trade to give evidence.

92. You are not responsible in any way for it further?—No.

93. If you look at Clause 3, you will find that in the description of the Lee

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and its tributaries there is an exception made about the middle of the clause, line 29, "except that part of the ancient course of the river called the Mainfold Ditch, which is by statute declared to be the property of the Governor and Company of the New River;" you observe the exceptions?—Yes.

94. I believe you and your brother Commissioners went down to Ware and held a sitting there, did not you?—Yes.

95. And, at that sitting, you took evidence as to the state of the river. Just let me read, for the purpose of the Committee, a statement in page 11 of your report: "The middle district, lying between the commencement of the New River at Hertford, and the intake of the East London Waterworks at Ponder's End, comprises a population of 79,000 persons. Hertford might seem to be more properly placed in the upper district, because it is a short distance above the point of the commencement of the New River, and formerly its sewers delivered into the Lee above the same point. But, by an Act passed in 1854, the New River Company obtained powers to lay down intercepting main sewers through the town, to construct works for treating the sewage by the liming process, and to convey the effluent water past the New River head into the Lee, above the town of Ware. The New River Company have completed these sewerage and outlet works at an outlay of about 22,000*l.*, and maintain them; they also subject the sewage to a liming process at a further cost of about 700*l.* per annum, sparing neither trouble nor money. The effluent water usually passes away clear, but being, as it is, the sewage of nearly 7,000 persons, it cannot be otherwise than a nuisance, and it is, according to the evidence, a constant cause of complaint to the people of Ware." I ask you whether you adopt that; I presume you do; it is in your report?—Most unquestionably.

96. Then I may take it without referring to the evidence of which this is the summary; this correctly states the case of that Mainfold Ditch as a nuisance?—Yes.

97. Mainfold Ditch being a nuisance, as you found it to be, in point of fact, may I ask you whether you can give any good reason why the Mainfold Ditch should be excluded from the operation of this Act, and should not be included as one of the tributaries of the Lee, as in other cases?—No, I cannot; I do not know why it should be excluded.

98. If you admit it to be a nuisance I will not press that point any more; let me ask whether there was brought before you the New River Company's Act of 1854, under which they obtained powers to intercept the sewers at Hertford, and to carry all the sewage water into this Mainfold Ditch after having deposited the solid matter. I believe that is the process, is not it?—The process is the one known as deposition by lime, which tends to take out the solid and flocculent matter from the sewage, leaving the clear water.

99. Then does the sewage water pass away clear?—It contains all the salts of the sewage, and if it were allowed to stand stagnant it would putrify, but if it is passed into a larger body of water and continued in motion it does not so putrify.

100. I think you admit that you had evidence put before you that it has amounted to a positive nuisance at Ware?—I believe if it continues in that condition it will continue to be a nuisance.

101. I will ask you to get it upon the notes in the most convenient way. The Act of 1854 was the Act that recited in the Preamble that it was expedient "that the said company should be enabled to provide more effectually against the deterioration of the waters supplying the said New River, by the construction of certain intercepting sewers, drains, and other works." That is reciting the expediency of making those drainage works which you have just told me empty themselves into the Mainfold Ditch. I find in Section 5 they have power to make it in these words: "A sewer or drain which shall terminate in the parish of Great Amwell." Great Amwell, probably you know, is considerably below Ware, is it not?—I really do not remember.

Mr. *Powell.*] Does that Act make it obligatory upon the companies to construct the Mainfold Ditch?

Mr. *Round.*] No, Sir; only to drain into the Mainfold Ditch.

Chairman.] The Mainfold Ditch is a very old ditch?

Mr.

Mr. *Round.*] It is so; but in using the Mainfold Ditch, you will observe, for the purpose of conveying the sewage of Hertford, having been deodorised by the liming process, that water comes into the still water, between the two locks above Ware, and, as we say, very much helps to poison that river.

Mr. *Davison.*] Would my learned friend allow me to draw his attention to the Lee Navigation Act of 1850, Section 91, on the construction of terms. "The words 'River Lee' shall extend to and include not only the ancient course of the river, but also all cuts, canals, and streams now or at any time heretofore or hereafter forming part of the course or channel of the River Lee, or of the navigation commonly called 'The River Lee Navigation,' save and except that part of the ancient course of the river called the Mainfold Ditch, which by the second recited Act is declared to be the property of the Governor and Company of the New River."

Mr. *Round.*] I am quite aware of that; that merely states that by the particular Act in question it is stated to be the property of the Governor and Company of the New River; it does not carry it one step further than the statement of the Preamble here, that it is by Statute, and that Statute is the one referred to there. I do not care whose property it is, but I ask Mr. Rawlinson to give me a reason why, having ascertained it as a matter of fact to be a nuisance at Ware, it should be excluded from this section. I understand that he can give me no good reason why it should be so, though he says that he is of opinion that it ought to be so.

Witness.] I cannot tell the reason; if there are legal reasons I do not know anything at all about that, but my opinion is that it ought to be included in the Bill.

102. I will leave that, and I will just ask you as regards representation. The Bill as brought in, if you have had an opportunity of considering it, you are probably aware does not contemplate giving any right of representation to the towns affected by it?—No.

Mr. *Denison.*] We agreed to postpone the question of representation.

Mr. *Round.*] If you please, then, I will not go any further.

Cross-examined by Mr. *Denison.*

103. Perhaps I had better follow out this question of the Mainfold Ditch. I am not going to start anything about the New River Company; but this point having been started by my learned friend Mr. Hope Scott, we had better clear it up. The Mainfold Ditch probably you know performs two functions; part of it is a conveyer, is not it, of clean water, but the lower part of it is also a conveyer of what has been sewage water, water that has been deodorised, if you like?—From the towns that run into it.

104. That part of it which is the conveyer of sewage water, though it is deodorised, would fall within the provision of the Bill, I suppose?—I think it ought to do so.

105. Suppose it does, I conclude that you give the same answer with regard to that that you did with reference to the East London Water Company's drain a little time ago; they have a catch-water drain, you know, and some sewage goes into that or another, I think you say; is not that so?—Yes.

106. Just say again how you propose to deal with that in the Bill?—I think it should be placed under the jurisdiction of the Conservancy, or under the jurisdiction of the new Conservancy Board.

107. Then the sewage coming in there would be Hertford sewage, which of course would have to be dealt with by the town of Hertford, just as the sewage of any other town has to be dealt with by that town?—Yes.

Cross-examined by Mr. *Bidder.*

108. You took a great deal of evidence about the Stort navigation?—Yes, it is embodied in the Report.

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109. Mr. *Powell.*] What is the Mainfold Ditch; is it a natural conduit, or was it made by some person?—I cannot say.

110. Mr. *Bidder.*] I understand you consider it very important for sanitary purposes that the Stort navigation should be put under the control of the new Conservancy Board?—Yes, so that there should be unity of action.

111. I suppose you would say that the navigation interest should be subservient to the sanitary interest?—I think so.

112. You appear to contemplate an arterial system of drainage, the interception of drains, the governing of mills, and the buying up of mill rights where necessary, and such other steps as may suggest themselves for the purification of the river?—I assume that the Conservancy Board should have the power to take any such steps as making intercepting sewers, and buying up mill rights, and doing other things, so as to render the water pure, and to preserve it pure.

Mr. *Bidder.*] Perhaps, while I am standing up, the Committee will allow me to call their attention to this. There is a missprint in the report of yesterday's proceedings, which is rather important. It is at page 29 of the Minutes. I am made to say that we object to any transfer at all. It ought to be that we do *not* object to any transfer. That is a mistake, and it is exactly the reverse of what I did say.

Chairman.] I understood you to say that you had already arranged.

Mr. *Bidder.*] No, there has been no arrangement, but we do not object to the transfer at all.

Chairman.] The promoters ought not to keep you here before the Committee. When the points between you and them are so very small, surely they would be able to arrange them with you.

Mr. *Davison.*] If they will send us what they propose, and tell us what they want, we shall be very glad to consider it.

Chairman.] If two distinguished bodies stand aloof, and neither of them will initiate the proceedings, I do not see how it is to come to an end.

Mr. *Davison.*] If they will tell us what they want—

Mr. *Bidder.*] I can tell my learned friend in one moment what we want; we desire, and are quite willing to be put upon fair terms, but we desire that you should take no powers, which is the case as the Bill is at present drawn, over our navigation, unless you buy us.

Chairman.] I understand that means this, that within some reasonable period of the passing of the Act, you are to give them notice of your intention to take their property, and when you give that notice you are to pay them according to the Bill; and until you give the notice to take their property you are not to interfere with them.

Mr. *Davison.*] That we should agree to as regards the navigation and everything short of conservancy; but our case is, Sir, and that is what we press upon the Committee, that either we must have the entire water area for conservancy purposes, or in point of fact we get nothing.

Chairman.] That would be the basis when you made up your mind to get the entire power; you would give them notice and take possession; they must have a reasonable time for notice. Supposing you give 18 months' notice from the passing of the Act, that would give the new Board ample time to examine its whole position and to give notice.

Mr. *Davison.*] But the question is as between conservancy and navigation. We do not want to interfere with the navigation in the slightest degree; they may carry that on subject to anything in this Act.

Chairman.] Do you wish to pass your Bill entirely without prejudice or without power to interfere with their rights?

Mr. *Davison.*] Not as regards conservancy; we should ask you, and I think we should prove a case which would enable the Committee to give us conservancy power.

Chairman.]

Chairman.] The only object of the conversation was to know whether there was any real point in dispute; if not, you might arrange it as between yourselves.

Mr. *Davison.*] That is our case; that our Bill is nothing unless we have conservancy powers over the River Stort, and if we had them we should be in a position, as regards the navigation, to say whether we should do it in a certain time.

Mr. *Bidder.*] We require nothing more than we have suggested; that is what we require.

Chairman.] That is, that you would take your Bill subject to their rights; that is, if you do not purchase them.

Mr. *Davison.*] We cannot take our Bill unless we have conservancy powers; but as regards their rights or power over the navigation, we will tell you what we really desire as to the time when we should or should not take that navigation.

Chairman.] You would not exercise your conservancy rights to the injury of their rights? that is what I mean.

Mr. *Bidder.*] If the conservancy rights mean a control over us, with an interference with our interests, all we say is that you are not in any way to interfere with our interests, unless you mean you buy us.

Mr. *Hope Scott.*] Oh, no, that is utterly impossible; it is quite contrary to the whole principle of this Bill. If you only refer to the Thames Act, which includes canals and private property, just as this does sewers——

Mr. *Bidder.*] I am between two promoters now.

Chairman.] The object of the conversation was to see if your views could be so far met as to save you the trouble of opposing the Bill.

Mr. *Davison.*] If we do not want to take the navigation from them, we will, within a definite time, at least 18 months or two years, say whether we will exercise those powers or not; but conservancy powers we do respectfully ask in the same way as they were obtained in the Thames Conservancy.

Chairman.] But not conservancy powers to injure them.

Mr. *Davison.*] Conservancy powers saving their navigation powers.

Mr. *Bidder.*] That we had better arrange afterwards.

Chairman.] If you can arrange it together, it will be as well to do so.

Cross-examined by Mr. *Michael.*

113. I think you held an inquiry at Tottenham, did not you?—Yes.

114. Was the Moselle and the other brooks brought to your attention there?—Yes.

115. There is one that is left out in the 3rd section, the Stonebridge Brook; is that marked upon your map?—No.

Mr. *Bidder.*] I presume we shall have an opportunity of asking questions of Mr. Rawlinson upon other heads of the Bill?

Chairman.] Oh yes.

116. Mr. *Michael.*] Do you remember that being brought to your attention?—I do not remember.

117. Perhaps I may recall it to you; it is a brook that brings down a good deal of sewage matter, from the South Hornsey and Hackney parishes?—Is it alluded to in the evidence?

118. That I cannot tell you whether it is or not; we wish it to be put in, because other brooks being put in it might put the parish of Tottenham in a difficulty subsequently; it is the Stonebridge Brook; it flows into the Lee at the

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point of junction with the Moselle; perhaps you will remember?—Will not it come under the jurisdiction of the Conservators, by the general clause?

Mr. *Michael.*] We want it to be put in, because others being present, and this being exempted, might put us into a difficulty; it flows into the Lee at the point of junction of the Moselle with the Lee, and brings the sewage from south Hornsey and Hackney.

Cross-examined by Mr. *Sargood.*

119. Your attention was called to the opinion of Dr. Letheby, that common sewage after running seven or eight miles in good river water becomes purified, so that the sewage could not be discovered chemically?—Yes.

120. I think you said that you did not agree with him?—No.

121. Do you mean that you disagree with him in principle, or that you think that that distance is too small to accomplish that purpose?—I disagree with him in principle; I do not think that you are justified in passing sewage into water that is subsequently used for domestic purposes, however far it may go.

122. I am not asking you about the moral justification; I ask the scientific question. Do you intend to say that, in your opinion, the transit of common sewage through water does not cause it to lose some of its impurity?—No; I know that it does; but that depends upon several things. It depends upon the character of the subsoil; it depends upon the volume of water, and it depends upon the rapidity, or otherwise, of the stream through which it is passed.

123. Then you do agree with him in this principle, that its transit through water has the effect of purifying it?—I believe it has.

124. Now, as he has said that seven or eight miles is sufficient to purify common sewage, will you tell me what distance of miles you think would produce the effect, taking the condition that he suggests in his answer?—I say again that it depends upon the volume of the sewage, and the character of the subsoil, and the relative volume of sewage, and of the water through which it passes.

125. Take it under its worst possible conditions, according to your experience what number of miles will you allow me to purify the sewage by such a transit?—I really cannot tell you. I can only tell you certain broad facts that I know; for instance, I am acquainted with the Bridgewater Canal, at Manchester, which is probably the foulest water that could possibly be conceived. At Runcorn, a distance of 30 miles, having an average velocity of about one mile per hour, it lost all its apparent character of sewage; it ceased to be discoloured, and it ceased to have any foul smell, excepting under peculiar conditions of the atmosphere, when the stench was almost as bad as it was at Manchester, upon certain occasions.

126. And there was nothing between Manchester and that extreme point of 30 miles to give rise to the odour in the existing sewage from Manchester?—Other than flowing along evenly, only at about a mile an hour, oxidising and combining with the subsoil of the canal.

127. Your attention has been called to the question of deodorising by lime. I suppose, if that process took place, it would not require so long a distance for the material to travel through the water in order to become partially pure, would it?—If you take out of sewage water all that can be extracted by the liming process, that is all the solid and all the flocculent matters, you take away probably nine-tenths of its power to do mischief, and you would unquestionably remove perhaps nine-tenths of its mischievous effect from the stream into which it passes; it is not so much the water that causes the mischief as it is the solid matter.

128. Thanking you for the nine-tenths you have given me, let me see how I can get rid of the other tenth?—That is only a guess.

129. I will assume that your guesses are worth listening to; how many miles will you give me to get rid of the remaining impurities of the one-tenth after obtaining deodorisation?—You must not give me any miles; that I should decline to answer; as an honest man I could not tell you.

130. Then I am sure I would not press you. I have got it down to one-tenth of the annoyance, at any rate. You held some inquiries at Luton?—Yes.

131. I am representing the Board of Health of Luton, who are interested in this. You know that, for years, Luton has been practising deodorisation at a very

a very large outlay, you heard that in your inquiry?—Yes, and examine the works.

132. You are aware also, probably, that they are doing that under the sanction of an injunction from the Court of Chancery, which prohibits them sending sewage into the river, except and until after they have so deodorised it?—That is so; and I think they are spending some 600 *l.* or 700 *l.* per annum.

133. Do you know how far Luton may be situated from the highest point at which either of the two companies draw water?—The map here very roughly shows it. I cannot tell you; perhaps about 15 miles.

134. Therefore that one-tenth of annoyance, which you say is left in it, has to travel 15 miles before it gets to the first take of water?—If I am right in my rough calculations.

135. I will take it. I dare say you are more likely to be right than I should be at a guess of that sort. You do not mean to suggest that the water companies drawing from that point are seriously damaged at Luton after all they have done to purify the sewage, do you—not that particular water company?—Yes; they are, in my opinion.

136. When Dr. Letheby says that common sewage becomes pure after a transit of 7 or 8 miles, you think that one-tenth of the impurity alone is not got rid of after a transit of 15 miles?—I am very sorry that Dr. Letheby should have said so.

Mr. *Davison.*] Will you tell me where he said so?

Mr. *Sargood.*] Question 2381, on page 142 of the East London evidence.

Witness.] I have a very great respect for Dr. Letheby; I believe him to be a most useful and energetic man, but I regret that he should have made such a statement.

137. We will assume that he has some self-respect; you have not heard him say that he regretted it, have you; Luton being 15 miles from the water take, in whose interest is it that Luton is to be put to the extra expense that is proposed by the Bill; for what purpose, and for whose advantage?—Well, I have yet to understand that if Luton is made to do its duty it will have any extra expense; my experience and opinion tells me that if it does its duty it will save existing expense.

138. I want to know, they having done so much as they have, and by a very severe taxation upon their people in order to bring themselves within the direction of the Court of Chancery, for whose advantage do you propose their remodelling their system at an enormous expense to themselves?—For their own advantage, and for the advantage of a moiety of the people of London.

Chairman.] I have been looking at the petition of your clients, and they do not seem at all to object to the extension of the jurisdiction over the river on which Luton is situated, but they only object to the mode in which the Board is to exercise that power as against the town of Luton.

Mr. *Sargood.*] I am not surprised at your calling my attention to that; to tell you the truth, I was rather at a loss when I read the petition to know what they did object to, they have not drawn it up artistically.

Chairman.] It is substantially different; I observe that, because we shall have a very active contention, no doubt, when we come to Clauses 61 and 62, as to what is to be the jurisdiction of the new Board when we have established it, which we have not yet done against those towns; and I thought it might be more convenient to you if we had your contention brought before us with the other towns; the point now is the general jurisdiction over this river.

Mr. *Sargood.*] That is so. I will tell you why I call attention to this particular point. If, in accordance with the Preamble, the Bill is to be confined to those terms, there is no suggestion for an enlargement of the constitution of the River Lee Trust. The Preamble states that the object of the Bill is to transfer the existing navigation jurisdiction, whose limit at present is Hertford, and in addition to that to give certain sanitary powers; if that were all we should be content, because they would not reach us. But if they propose carrying out the sanitary powers of the River Lee, as

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proposed by this Bill, though not by the Preamble, and it is to be a very different river to what it has been for many years past, then you see I must attack that question, whether you would extend the River Lee to some place which is beyond Luton, and, therefore, inclusive of Luton; beyond that I have no interest in Clause 3.

Chairman.] A paragraph in the Preamble states, that it is desirable that the Lee and its tributaries should be brought under the conservancy. If you object to the new body, which we will assume to be constituted, having any jurisdiction over the tributaries of the Lee, that is a tributary on which Luton is situated.

Mr. *Sargood.*] It is on the Lee itself.

Chairman.] If you object to the jurisdiction going up to and above Luton, it is quite right that you should go on now; if, on the other hand, your clients, as they would seem by their petition, acquiesce in this body having jurisdiction to keep the river pure up to Luton, and above Luton, then the question would more properly come when we consider what powers they are to have against your town, and other towns.

Mr. *Sargood.*] That is so; but supposing I succeeded in persuading the Committee, which I am not very sanguine of doing, not to enlarge the meaning of the words "River Lee" to such an extent as is proposed by this Bill, but to stop somewhere short of Luton, then I get rid of the necessity for any further discussion, because, being out of the Bill altogether, I should not have to trouble you upon the question of how they would deal with us if they do not reach us.

Chairman.] The difficulty is that you do not in your petition object to the extension of the jurisdiction.

Mr. *Sargood.*] I am in your hands, Sir, and must, of course, bow to your decision.

Chairman.] I think it would be better that you should bring the question forward upon these clauses, upon which we shall have a good deal of discussion.

Mr. *Sargood.*] What I object to is to the jurisdiction of the River Lee being extended.

Chairman.] Your petition does not object to those clauses which extend the jurisdiction generally, but it objects to the powers being extended against your clients.

Mr. *Sargood.*] Then I must take it that you exclude me from discussing it on account of the form of my petition.

Chairman.] If you wish to take that point, the petition ought to be, as it were, amended, because that is not the petition that your clients have sent.

Mr. *Sargood.*] I certainly would have amended the petition if I had seen it before it was lodged. I am willing to be shut out from the discussion, but I would rather not have the responsibility of electing to abandon it.

Chairman.] I think I may safely say that the town having sent its petition, it would be very much better for you to be heard upon those clauses, which propose to give jurisdiction to the Board over that town.

Mr. *Sargood.*] Would you allow us to amend it, Sir, by enlarging the prayer against the Preamble generally.

Chairman.] If you make that application, but is it necessary? If the town do not object to it, why should you do it?

Mr. *Sargood.*] We would rather amend it, if you will allow us, so as to have the whole subject open; we are the earliest point on the river.

Chairman.] If you wish to raise the point why the new Commissioners should exercise jurisdiction over the River Lee at the town of Luton, and above it, you had certainly better amend the petition to that extent.

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Mr. *Sargood.*] I told you very candidly, the view I take in the protection of the interests of my clients is this. I feel that I must not leave any stone unturned, and the first shaft I aim is to cut off the river below us, to end the jurisdiction so that they cannot reach us. Then if I do not succeed in that, my notion would be this, under the exceptional circumstances of my case, we having done so much to ask the Committee to exempt us from the operation of the Bill. If that fails, then we come upon the more moderate question, and we come to see how many years we may continue to do that which we do say at present is not found to be an annoyance or injury to the water.

Chairman.] If you think it necessary to make that contention, the Committee will not shut you out on a point of form; but you will observe that it is a petition from the chairman and members of the Luton Board of Health in opposition to certain clauses.

Mr. *Sargood.*] Strictly, I am at your mercy.

Chairman.] It may be that the Board of Health may in their official capacity have considered the question, whether there should be a certain jurisdiction over the river for their benefit, as well as anybody else's; but they object to the power of the Board being over that portion.

Mr. *Sargood.*] We all feel the weakness of the petition; I am merely acting upon instructions.

Chairman.] If you do not press this amendment, in order that you may go into the general case, it would be much better that you should address yourself to the question of jurisdiction.

Mr. *Sargood.*] I would rather amend the petition.

Chairman.] If you please.

Mr. *Sargood.*] I do not think I need carry it further.

Mr. *Cripps.*] Would you allow me to suggest, Sir, after you have heard this evidence, the propriety of postponing your decision on Section 3 until the whole case is heard—until you have heard the general case which we have against the powers which are sought for in the event of Section 3 being carried. Of course, if Section 3 were out of the case, the whole case as against us fails, and then it seems to come all to one case against me. You wish to extend your jurisdiction over me for the purpose of doing particular acts, and therefore it seems equitable that when the evidence is all heard upon that clause, we might pass on and it might be postponed.

Chairman.] We shall get into great confusion if we do that. The only question now is, whether the jurisdiction should be extended to the tributaries of the upper waters of the main stream of the Lee. Then if we resolve that point in the affirmative, the next question is, what power should be exercised upon this River Lee as regards landowners and parks, and so on, or as regards particular properties and trades.

Mr. *Cripps.*] In fact, those two questions are really one; they are so mixed up together that it is almost impossible to separate them. It is no use giving useless jurisdiction. You extend the jurisdiction for the purpose of doing particular acts.

The Hon. Mr. *Stanhope.*] I may be allowed to say that I was going to urge the same point, but I am in this difficulty, that with regard to the 67th clause, which contains very large powers, if that 67th clause should be amended in a particular way, then my objections on the part of my clients would not apply against the third clause. I thought it might be more expedient to put off this clause till that has been considered; if the Committee think not, of course I will proceed.

Mr. *Davison.*] We shall never get on unless we deal with something.

Chairman.] We had better go on with the clauses.

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Cross-examined by Mr. *Wilson*.

139. Before you had the honour of entering Her Majesty's Service, I believe you were a consulting and practical engineer yourself?—Yes.

140. In your private capacity you were the engineer who designed and constructed the drainage of the West Ham Board of Health?—Yes.

141. Without at this present juncture anticipating any question that may arise, will you generally, in as short a way as you can, apprise the Committee in one sentence, of the extent and magnitude of that system so designed by you, its general extent. It comprises, I believe, some hundreds of miles, does it not?—West Ham lies on the north bank of the Thames, and on the east of the River Lee, and is practically completely sewered, the outlet being into the River Lee itself.

142. Mr. *Powell*.] Where?—Just above that bridge you were speaking of as the boundary (*pointing out the same*).

Chairman.] Yours is really a case which has reference to powers at West Ham.

Mr. *Wilson*.] I was going to call your attention to that; you just now alluded, and my learned friend Mr. Sargood spoke about, the extent of the jurisdiction only taking in the upper part; I am now carrying it on, and begging your attention to the lower part. It would appear by your last sentence that there is an extension of the jurisdiction here by this Bill, given not only higher but lower; at the present moment the facts are that the Thames Conservancy have jurisdiction over the River Lee to the extent of three miles, taken as the crow flies. The valley of West Ham is therefore bounded on its west by the River Lee, and on its southern extreme by the River Thames, both of which bodies are under the jurisdiction of the River Thames Conservancy; but I will call your attention to the fact that by this Bill, especially by the alterations made within this last hour, they have in point of fact put us in a position that we have two conflicting bodies to deal with, but, as Mr. Rawlinson has just answered, one of our outlets will now come into that portion of the River Lee under this regulation, which will be under the conservancy of the Thames, and the other one will be under the jurisdiction of the River Lee Commissioners. We shall be having, in point of fact, two outfalls, one of which would be under one control and the other under the other. I was about to address a question to Mr. Rawlinson to this effect: whether in point of fact the promoters of the Bill had not better slightly modify the alteration which they have made to-day, and by carrying the limit of the jurisdiction say half a mile higher than where they propose that it should be, viz., at the iron bridge, get rid of that difficulty, and leave West Ham simply under one Board of Conservancy; that is the point to which I will address my questions.

Mr. *Davison*.] I do not quite gather what Mr. Wilson wants.

Chairman.] He wants the line of the jurisdiction drawn at the parish of West Ham, so that he should not be partly under one jurisdiction and partly under another.

Mr. *Davison*.] Does he wish to be under our jurisdiction?

Mr. *Wilson*.] He certainly wishes to decline the honour.

Chairman.] The greater part of the parish is under the Thames Navigation Commissioners.

Mr. *Davison*.] I am afraid he must show why he should not be under our control.

143. Mr. *Wilson* (to the *Witness*).] Will you call your attention to the altered boundary of the jurisdiction, as proposed this morning, which is to be just where the River Lee passes under the old iron bridge; are you acquainted with that spot?—Yes.

144. The present outlet of the sewage of the West Ham Board of Health, as designed

designed by you, is from a quarter to half a mile above that?—It is a little above; it is marked upon this map (*pointing it out*).

145. Is it not the fact that the present outlet, as designed by you, of the West Ham Board, is about two hundred yards above the point which they now propose as the line of demarcation between the two jurisdictions?—The pumping outlet.

146. The tidal outfall is, on the other hand, some few hundred yards below it?—No, it is immediately upon the road side.

147. But still below the iron bridge?—A little below.

148. So that if the line of demarcation is at the iron bridge, one of our outfalls will be under the old corporation, and the other under the new?—Yes, that is so.

149. And any arrangement whatever for the alteration of our sewage and for the diversion of it, would have to be done with the sanction of those two separate boards?—Necessarily.

150. In your judgment is that a desirable state of things?—If possible, it would be better to have to deal with one, I think.

151. Is it not absolutely necessary, in your judgment, having regard to the locality of West Ham, that the sewage of West Ham should drain into the Thames, or into the River Lee just before its junction with the Thames?—If I am asked whether it is advisable to continue discharging sewage into the Lee at its present point, or into the Thames, I must be understood to say——

152. That is not what I asked you. I asked you whether, having regard to the locality of West Ham, no man knowing it better than yourself, bearing in mind that the whole of its western side is bounded by the Lee, and the whole of its southern side by the Thames, is not it almost absolutely necessary that it should drain into one or the other?—The effluent water must have access to either one or the other.

Chairman.] Do you wish to drain anything more than you do at present into the river?

Mr. *Wilson.*] No; I fully concede that things cannot remain as they are, but I am endeavouring to show that we have been making an effort to get rid of the existing state of things for the last two years.

Chairman.] Is there any real question about this two hundred yards?

Mr. *Davison.*] What we should propose would be that we should take our jurisdiction to a point 50 yards below the bridge; that would include both outlets.

Mr. *Wilson.*] We should most strenuously oppose that.

Mr. *Davison.*] Do not take that as conceded by the Thames Navigation Board, but that is the proposition which we should make.

Chairman (to Mr. *Wilson*).] What does it matter whether you are under this trust or under the Thames—the Thames would have the same power to control you?

Mr. *Wilson.*] Yes.

Mr. *Davison.*] There would be a great deal of difference between our having the jurisdiction and their having it; in the first place we have larger powers, and secondly, the Thames Navigation would have less interest than we should in controlling that part of the river.

Mr. *Wilson.*] Then you again modify your proposal for the second time to-day?

Mr. *Davison.*] I do not know what I modify. I thought this gentleman did not know what he wished for; our desire is, if the Thames Navigation will allow it, to include both the outlets in which he is interested.

Mr. *Wilson.*] The Committee will kindly understand that our wish is directly the contrary. The Committee will bear in mind that Mr. Rawlinson's last answer was, that it was absolutely necessary for West Ham to drain into the Thames, or into this part of the Lee.

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Witness.] I said the effluent water must drain into one or the other; that is the clarified or purified water.

153. Sir *George Bowyer.*] Not the sewage?—Not the sewage, certainly not; to run the sewage in would be to stultify all that has been done.

154. Mr. *Wilson.*] Are you not aware that the Board of West Ham has been making efforts to obtain an outlet even for that effluent water into the Thames? I am aware that they have.

155. Are you aware that the Court of Conservancy of the Thames have actually refused to West Ham permission to have an outlet of the effluent water only into the Thames?—I believe they have.

156. Then if we are to be placed in this position, that the Conservators of the Thames are to be permitted to refuse us an outlet for our effluent water into the Thames, and the gentlemen here are to be permitted to refuse us an exit for our water altogether, shall we not be thoroughly at a dead lock?—Most unquestionably.

157. Under those circumstances is it not in your judgment far more desirable that the West Ham Board should have only one of those bodies to deal with than two; they would be better able to negotiate a discharge for their effluent water, would they not; is not it better in your judgment, in order to obtain a discharge for that effluent water only, that the West Ham Board should be placed in the position of only having to deal with the Thames Conservancy instead of the new body?—I do not think I am qualified to answer that; I cannot tell whether two bodies might not be better than one.

158. You think we might hit one off against the other?—I cannot tell whether or not you would be prejudiced by it.

159. What would be our position, supposing this Bill were to pass, and these gentlemen were to stop up this outfall within these next two or three years, and the Court of Conservators of the Thames refused us permission, what would be the effect upon West Ham; would not it be submerged within an hour in such a storm as we had yesterday?—In such a storm as we had yesterday you would submerge a population of 30,000 or 40,000, and you would destroy property worth perhaps 150,000 *l.* or 200,000 *l.*

160. As I understand you, speaking from your own knowledge, considering what the law is already on the Thames, taken in connection with what the law would be under this new Trust, if the trustees were to put it in force, in the course of say six hours, a population of 30,000 or 40,000, and property to the extent of 15,000 *l.* or 200,000 *l.* would be submerged?—That is so; the area is 8 to 10 feet below high water level.

Re-examined by Mr. *Davison.*

161. I have not heard all that Mr. Wilson has been asking you, but can you tell me what it is he wants; he says the Thames navigation will not let him drain into the river at present?—He seems to think he would rather have the two outlets within the Thames jurisdiction than under the new jurisdiction.

162. If I understood him rightly, he said that the Thames jurisdiction refused to allow him to send the effluent water into the Thames?—Yes.

163. Having found that they will not let them do it, perhaps he thinks he might get the Lee Trust to let them do it; will you tell the Committee how you would deal with his case?—I devised the whole of these works in consultation with Mr. Beardmore and the Dagenham Marsh Commissioners; and the present outlets, I am bound to say, are only permissive, there being no other outlet; and it was understood that when it could be shown that other means could be provided for doing away with the sewage, or dealing with it so as to render it innocuous, those other means were to be resorted to. The present pumping outlet is not where it was originally designed, it is where we were forced to put it, because we could get no land nearer to the proposed line of the metropolitan outfall, and it was contemplated to lift the whole of the sewage to the metropolitan outlet; it is merely a question of pumping. The West Ham Board are willing to be passed into the metropolitan outlet, but the Metropolitan Board of Works say to them, No, we will not take you, and there is no other outlet for them.

164. For present purposes, you would be of opinion that it would be better that

that both outlets should be under the power of one Trust?—I think so; and that they must either go into the metropolitan outlet, or find another outlet.

165. Let us deal with one jurisdiction first; would not it be better for the River Lee that the whole of it, including both these outlets, should be under the River Lee Trust, than under the Thames Navigation, seeing that the Thames Navigation have so small an interest in the piece at the end of the River Lee as compared with the interest the Lee Trustees would have in it?—I think so; I do not see how West Ham would be benefited by electing to be under the Thames Navigation rather than under this new Trust, both of them being determined to do the same thing.

166. Let us pass up the river and take Mr. Michael's case; he mentioned Stonebridge Brook, and he claimed that that should be named in Clause 3 of the Bill; but is it named or shown on the map as having an independent outlet?—Our map is so small that it does not show, and I scarcely remember.

167. We have no objection to put it in; as we understand, it is included in the Moselle?—There are a great many small brooklets that come into the tributaries of the Lee that have no names.

Chairman.] Does it run into the Moselle?

Mr. *Michael.*] The Moselle and Stonebridge Brook both empty themselves at the same point.

168. Mr. *Davison* (to the *Witness*).] You gave some evidence about the Catchwater Drain made by the East London Water Company; it is their private work, is it not?—I assume it is.

169. Made at their own expense for their own purposes?—I assume so.

170. And maintained by them at present?—I assume so.

171. You have said you think that ought to be included in the Conservancy?—That is to say, that the Conservancy Board should have jurisdiction over it.

172. You do not mean that they should maintain it?—No; that they should have conservancy jurisdiction over it, as they would have over the New River and the River Lee.

173. Passing to the Mainfold Ditch, that is a very old ditch, which is used by the New River Company for the purpose of passing water after it has been deodorised, and passing the clear water which they use for consumption?—I do not remember sufficiently the condition of the Mainfold Ditch, to be able to speak particularly to it.

174. As a general proposition you would not have the Conservancy take an absolute power over the drains and sewers themselves, but you would propose that their powers should extend only where the outfalls are into the river?—That is all. As in the case of a town the Conservancy Board would not have jurisdiction within the town, but they would have jurisdiction over the outlet.

Mr. *Davison.*] That Mainfold Ditch is named in the Act of 1866.

Mr. *Hope Scott.*] We shall be able to explain that.

175. Mr. *Davison.*] Very well, I need not trouble about that. Now as to Luton, Luton is marked as eight miles distant from the intake of the New River; I understand you that the water eight miles below Luton is far from being in a fit state to be used?—Yes; the sewage of Luton is about as objectionable as any sewage in Great Britain.

176. That is where Mr. Willis carries on the straw plait trade; I believe he uses two or three tons annually of oxalic acid, and great quantities of brimstone, all of which he turns into the river?—Luton is the greatest seat in this kingdom of the straw plait making, and I believe the greatest in the world; it carries on a trade of something like two millions per annum in straw plait.

Mr. *Sargood* (to Mr. *Davison*).] Should you not have said 18 miles instead of eight?

Mr. *Davison.*] I would have been glad to have said it if eight was wrong.

Mr. *Sargood.*] Then it is wrong; I am told it is 18.

Mr. *Davison.*] In any case, the state of things at Luton is such that if the

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the water passed a distance of even 30 miles, that would not be sufficient to purify it for the purposes of consumption at Hertford?—It would not be a sufficient justification for shutting it out of the Conservancy jurisdiction.

177. You say with reference to Luton that there would be no difficulty about the Luton people, without further expenditure, being able to do what is necessary?—That is my opinion; I think if the Luton people act for their best interests, they will as soon as possible cease carrying on expensive works costing them 1,000 *l.* a year, and that they will somewhere near get agricultural land and apply the sewage to it, which would very probably raise the value of the land from 30*s.* an acre to 10*l.* an acre per annum.

178. You had upon the inquiry Mr. Cumberland, of Luton, whose evidence is at page 61 of the Blue Book, who is a surveyor at Luton, who gave evidence before you with reference to the value of sewage for irrigation purposes?—Yes.

179. That, added to your general knowledge, induces you to say that they might do better for themselves, and at less expense?—I know that the land in that vicinity, upon the chalk basin, is the very best for disinfecting the sewage; it would more promptly disinfect the sewage; a smaller area would get rid of a larger volume of impurity, and you would get a considerable agricultural return. You have as poor farming in that district, and as poor land, as any in England.

180. Mr. *Powell.*] There is nothing in the oxalic acid to prevent the sewage being used for agricultural purposes?—Mr. Way, who was the chemist to the Commission, will be called, and he will answer that. We were afraid that such larger weights of oxalic acid going in would be very deadly to the water, but it appears that it combines with the chalk subsoil, and is neutralised.

181. Mr. *Surtees.*] Supposing the works to be established, what would it cost to apply the sewage to the land?—The price per ton would be so low that a fraction could hardly represent it. Where the sewage is applied to the land in the most economical manner, it is done, as is briefly described in our report, by open catch-water drains, and you would put 10,000 or 15,000 tons on at the expense of a labourer's wages; it carries itself, and the labourer simply goes and turns it on at different points with his spade.

182. Is that assuming that the town is at the top of a hill, and not at the bottom?—It is; it is assuming that the sewage can flow by gravity. If you have to employ pumping power, it is in proportion to the size of the engines, and to the height of the lift. But you would lift sewage water very economically. At Croydon the question was gone into, whether they would pay 2*l.* per annum per acre for land in the vicinity, or go seven miles and lift it 150 feet to get land at 30*s.* an acre, and it was decided that it would be much cheaper to lift it 150 feet, and go seven miles.

183. Mr. *Sheridan.*] Upon whose evidence did you make this statement in your report; the process of clarifying sewage improves it, in so far as the solids are removed, but the fluid remains sewage?—Mr. Way, who has made more analysis of sewage than perhaps any other man, and who was the chemist to the Commission, will give the Committee information upon that.

[The Witness withdrew.

Captain *Henry Watley Tyler*, R.E., Examined by Mr. *Wilkinson.*

Captain *H. W. Tyler*, R. E.,

184. I BELIEVE you are an Inspector of the Board of Trade?—I am.

185. Did you, in the autumn of 1866, receive instructions to examine and report upon the valley of the Lee?—I did.

186. That, I believe, was with reference to the inquiry into the East London Waterworks Company?—It was,

187. The autumn of 1866 would be subsequent to the date of the report now before the Committee?—No; previous to it.

188. Did you give evidence before the River's Commission?—I did not.

189. On the East London Bill did you give evidence?—No.

190. You have had the present Bill brought under your notice, and have considered it?—I have.

191. Confining your attention at present to the 1st and 3rd sections of the Bill, containing

containing a description of the Lee and its tributaries, are you of opinion that the whole of the water-shed of the Lee should be necessarily included in the jurisdiction of the conservancy to be created by this Act?—Distinctly.

192. I will take you shortly through your inspection of the Lee, so as to satisfy the Committee as to its present state, and so that they may see whether any alteration has been made since the evidence taken by the Commission: first of all, the source of the Lee is Leegrave Marsh?—Yes; the river rises at Leegrave Marsh, the principal source being in the middle of a watercress bed.

193. Half a mile from its source, does it begin to receive drainage from a farmyard?—Yes.

194. Then we come to Luton?—Yes, with a population, by the last census, of 15,329.

195. Being 3½ miles from the source?—Yes.

196. There we have heard the sewage is treated with lime before it is allowed to pass into the river?—I saw the sewage being deposited in a bed, and treated with lime, and I saw the effluent water passed by a channel three-eighths of a mile long into the river just to the north of Mr. Leigh's park.

197. In what condition was the water?—In a muddy condition.

198. Was your attention called to the fact, that an additional supply of water would shortly be provided to Luton?—Yes, there is only about a third of the town drained, and a third of the sewage of the town is passed through those works, but there is a prospect of the town being supplied with water within a short period, and as soon as that is done the whole town will be properly drained and provided with waterclosets, so that in a few years' time, instead of the sewage of 5,000 people being treated by lime and sent into the Lee, the sewage of three times that population will be so treated, and the expense of deodorising, which is now about 500 *l.* a year, would probably amount to 1,500 *l.* a year.

199. Sir *George Bowyer.*] Without bringing in any return?—A very slight return, indeed; for the deodorised sewage they get 2 *s.* a cubic yard, bringing in about 20 *l.* a year, a return so slight it may be almost called nothing.

200. Mr. *Wilkinson.*] There would be a threefold increase both in the amount of sewage turned into the river, and in the expense?—Yes.

201. We have already had the attention of the Committee called to the particular nuisance of the straw plait works; did you visit those works?—Yes; there must be a great deal of impurity sent into the river from those works. At Luton there are the most extensive straw plait works in the world, and there are a great many bleaching works in the town. I may also add, with reference to Luton, that the present deodorising works become perfectly useless in times of flood. During a high flood the water passes over everything, and those works are not competent to deal with the sewage then.

202. Is the valley from Luton as far as Wheathampstead very narrow?—Yes; and then it widens out considerably.

203. That brings you to Luton Park. Is that Mr. Leigh's park?—Yes.

204. There the Lee passes into the ornamental water of his park?—Yes.

205. Does it receive any contribution of sewage in that vicinity?—From there down to Wheathampstead there are mills and farms—there is the village of Newmillend, and there are mills and farms from which pollutions arise, more or less, all the way down.

206. Wheathampstead is seven miles from Luton?—Yes; it is a place with 1,960 inhabitants. There I observed a good many gully-holes with fermenting sewage in them, the bottom of the gully-holes being below the sewer. Where the sewer ran into the river I observed a cottage near it, from which some sewage was also going into the river, or there were signs of it.

207. The next place of any importance is Hatfield?—Yes.

208. Which is five miles below Luton?—Yes; at Hatfield they have some sewage works; they do not adopt the liming process as at Luton and at Hertford, but they deposit the sewage in beds, and run off the water into a large chalk-pit made for the purpose, and into several chalk-wells, which have been made to supplement the chalk-pit. The solid sewage is taken out of those pits and deodorised by lime, and sold to people who come for it with carts.

209. Mr. *Pember.*] They do lime it?—Yes; but not by the same process as is adopted at Luton and Hertford.

210. Sir *George Bowyer.*] Is that process profitable?—They had a great deal of difficulty, I was told, there, in selling it.

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Mr. *Pember.*] They cannot sell it; the farmers will not take it away.

Witness.] They sell a part of it.

211. Mr. *Wilkinson.*] Do you know what they get a yard for it?—Two shillings a cubic yard, or 2 *s.* 6 *d.*

212. How much a year would that produce as contrasted with the expenditure?—The amount of expenditure there is much less than at Luton and Hertford.

213. What do they do with the liquid matter?—It runs into wells, and they have a large hole which they have made in the chalk; they allow it by degrees to disappear in the chalk.

214. They have auxiliary wells to run it into?—Yes, because the chalk hole will not take it all fast enough.

215. Is it the fact that at Hatfield the soil is peculiarly chalky?—It is more porous than at other places.

216. Mr. *Pember.*] There are flaws in the chalk there?—Yes.

217. Mr. *Wilkinson.*] That is the way they deal with the sewage there?—Yes.

218. So that by that mode of dealing with it, the soil must be more or less contaminated?—Yes, the soil must necessarily be more or less contaminated.

219. Following the course of the river, the next important place is Hertford?—Yes.

220. That is six or seven miles further down?—Yes.

221. How do they treat the sewage there?—There they have got some settling beds, in which lime is admitted.

222. Is that by Higgs's process?—Yes; they allow a solution of chloride of lime and hydrate of lime, or slack lime to mix with the sewage, and they pass the effluent water through rough gravel, by way of filtering it to some extent, and run it into the channel which runs under the New River.

223. Having no communication with the New River?—No, passing under it and going into the Lee.

224. Do they sell the solid matter?—They sell the solid matter at 2 *s.* 6 *d.* a cubic yard, which produces 30 *l.* a year, and it costs 700 *l.* a year to carry on the works.

225. *Chairman.*] When the first efforts were made for dealing with sewage was there a theory started that the true way to deal with it was to put it into reservoirs, and to separate the solids from the liquids?—There have been so many theories upon the subject; that was one theory.

226. The sewage of some towns has been treated in that way?—Yes, I believe so; that is what they do at Hatfield; they allow the solid matter to deposit, letting the liquid run into pits, and then get out the solid matter afterwards.

227. The other theory is, that the whole of the sewage should be put upon the land for the purpose of irrigation?—Yes.

228. At present that theory prevails over the original one?—Yes.

229. All the new works have been made upon the theory of irrigation, have they not?—Most of them; but there are some that are being still conducted upon the liming process.

230. Mr. *Surtees.*] You say that the effluent water is conducted from the Hertford Works into the Lee, by a channel under the New River; does that channel run into a part of the old Mainfold Ditch?—Yes; the effluent water goes under the New River into the Mainfold Ditch, and so into the Lee.

231. Mr. *Wilkinson.*] It is between Hertford and Ware that the New River takes its source, is it not?—The New River flows from a point between Hertford and Ware, called Balance Engine, and it also takes some of its water from the Chadwell Springs.

232. Ware is two miles from Hertford?—Yes.

233. Ware has 5,000 inhabitants?—5,397 by the Census of 1861; all the sewage from Ware runs into the River Lee, through the sewers at various parts.

234. Let me call your attention to the town itself; that is on the left bank for about half a mile?—As you walk along the opposite bank, you see the sewers running in; you see a large one on the west side, and you see the others which run into the river without any attempt being made to purify the sewage; there is also a slaughterhouse, and one or two waterclosets on the river side.

235. Is there a large sewer near the Priory?—That is the principal culvert.

236. There

236. There are a large number of malt houses, are there not?—A great many.

237. So that altogether, the contributions of pollution at Ware are considerable?—Ware and Bishops Stortford are about the two next places.

238. So far as the River Lee is concerned, you would consider Ware as about the worst place on its banks?—As the worst source of pollution.

239. Then we come to Stanstead, which is about two and a half miles below Ware?—About that.

240. Will you tell the Committee the state of things at Stanstead?—At Stanstead I observed some small orifices running into the river and underground, and a surface drain, and a deep hole just above the bridge. There is also sewage running into the meadows at the back of the houses, between them and the river.

241. Rye House about a mile lower down?—Rye House is a place where a great many Londoners go at certain seasons, and there there is an extensive system of water-closets; all the sewage of Rye House runs into a separate brook for some distance, and then into the Lea. There were a good many complaints there as to the smell of the river, at certain times, from the sewage of the towns above. At St. Margaret's I observed a ditch, at the back of the houses, with sewage in it. That is on the opposite side of the river to Stanstead.

242. Following the course of the river, you come to Hoddesdon?—There is a large drain there, under the New River engine-house, flowing into the brook above the mill. There are some springs near the Mill, and I observed a privy and drainings from a cottage near it, all going, sooner or later, into the Lee. I understood that there was the liming process carried on there; but I did not see it going on.

243. The next place of any importance is Broxbourne; what is the state of things there?—There is a mill there, also, and a very stinking drain close by the Mill; and there are a good many cesspools, I understand, there. There is a farm yard behind the mill, draining into the river. There is also a pipe-drain below the station; there is also a ditch on the further side of the station, which is in a very filthy state.

244. Then we get to the neighbourhood of Cheshunt?—Yes.

245. What is the state of things there?—There is no sewage running direct into the river there; but there is sewage running through various channels, and surface drains about the country.

246. Does the state of the sewage in that district show a necessity for a general system of drainage?—It is as bad as it can be. I made inquiries at various cottages, and was informed that there were cesspools which were never emptied, the drainage from which ran into the ditches as well as it could. A good system of drainage was very much required in that district.

247. In that neighbourhood the East London Company were seeking power to extend their intercepting drain?—Yes, they wanted to extend it by two branches, by the Act of last year, but they postponed that scheme, knowing that a larger one was in contemplation.

248. That pretty nearly exhausts the River Lee?—Yes.

249. Then we come to the Mimram River; Welwyn is on the River Mimram?—Yes.

250. Is that a source of pollution?—Yes. I observed a new sewer which had been constructed there, rather below the town, and I saw some pollutions from cottages just above it, where they said, however, the water was particularly good for making tea and coffee; they were putting nastiness in at one side and taking out the water for making tea and coffee at the other.

251. Hertingfordbury is also upon the Mimram?—Yes; there was a little culvert there under a wooden bridge, in some ornamental grounds.

252. Let me take you to another tributary, namely, the Stort: take the town of Bishops Stortford, what is the state of things there?—Bishops Stortford is one of the worst places.

253. Will you describe the state of things there to the Committee?—I made a memorandum of certain pollutions there; there is a bathing establishment, to begin with, at the west end of the town; and then you come to a very large sewer about 100 yards from it; there were seven sewage outlets, including three from privies—those were all above the mill. Below the mill there were four

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outlets, four privies, three outlets, and four outlets, one of which was a clean pipe; then there was a privy with two openings into the river, and another pipe; then there was the head of the barge river, which seemed to be polluted, and a stream near it; then there was a large surface drain from the town at the junction of the three arms of the river; further on there was another drain near the malt-house, about 50 yards from it; then there were two sewer openings near the chapel; then there were three more privies and an iron outlet from the mill, with a great deal of muddy liquid running out from it.

254. That is the state of things at Bishops Stortford. Then we come to Sawbridgeworth, what was the state of things there?—At Sawbridgeworth there was a surface drain running into the overflow channel south of the town with sewage. The town is at a considerable elevation above the river; there were large malt-houses near the bridge; there was a farmyard with drainage running into an arm of the river; there was one town drain under the road between the malt-houses, and one surface sewage drain running into the head of the mill. Sawbridgeworth is rather a large place, having 2,700 inhabitants.

255. There remains but one place, namely, Thorley, which is between Sawbridgeworth and Bishops Stortford; what was the state of things there?—There was a very nasty sewage ditch there by the side of the road.

256. You have now described the state of things in the water shed of the tributaries of the River Lee as they now exist?—Yes.

257. Under those circumstances, is it, in your judgment, desirable that the charge of the entire water-shed of the River Lee should be placed in this Conservancy Board?—Yes.

258. And without that entire charge, do you think it possible for them to fulfil the object of purification for which they are to be constituted?—Not properly to fulfil it.

259. Can you tell in what way the system of drainage recently adopted at Welwyn was being carried out?—No; I only observed, in looking about the place, there was a new sewer: I know nothing about it.

Cross-examined by Mr. *Hope Scott*.

260. As to the Mainfold Ditch, will you look at that sketch (*handing the same to the Witness*) and see if it indicates what you suppose to be the state of things with respect to the Mainfold Ditch?—Yes.

261. In the Mainfold Ditch, about half way along its course, before it falls into the Lee, there is a cut which conducts into the New River the pure water which goes to London, is there not?—That I believe to be the case.

262. That sketch comprehends a portion of the Mainfold Ditch, which is not used by the New River Company; namely the lower part, extending from the cut to the Lee?—Yes.

263. Is it not into the lower portion of that Mainfold Ditch that the sewage water from Hertford is conveyed?—Yes; the sewage water from Hertford runs by a channel which passes under the new river.

264. And into the lower end of the old Mainfold Ditch?—Yes.

265. Then, of course, that portion of the Mainfold Ditch which conveys the pure water of the New River does not need any regulation under this Act?—I do not think that follows.

266. You think that that channel, which they use for the pure water, requires to be put under the jurisdiction created by this Act?—I think every channel, for whatever purpose, should be put under the conservancy; for instance, the navigation is apt to be flooded at that point.

267. This is as to preventing pollution?—I understood you to ask me with respect to conservancy.

268. I was asking the question with reference to pollution.

Chairman.] We gather that that portion of the Mainfold Ditch flowing into the river is different from that flowing out of the river; the last comes under your Conservancy Act for the New River, which is quite a separate matter and not affected by this Bill.

Mr. *Hope Scott.*] It is that portion above which is excepted in this clause. The

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The clause says, "Except that part of the ancient course of the river called the Mainfold Ditch, which is by Statute declared to be the property of the New River Company."

Chairman.] Does the Act distinguish that half of the Mainfold Ditch which conveys pure water into the New River.

Mr. *Hope Scott.*] I have the old Act; I had better put before you a regular plan of it, and, if necessary, you can include that portion of the Mainfold Ditch now used for sewage purposes.

Chairman.] We have agreed upon the substance of the thing.

Mr. *Wilkinson.*] Do I rightly understand that my learned friend wishes that channel to be excluded?

Chairman.] The New River is under the special conservancy of the New River Company, they being bound under heavy penalties to protect it. We do not propose to interfere with the conservancy of the New River; this is their canal under their protection. The New River is not a river flowing into the River Lee, and therefore it does not come under the conservancy of the River Lee.

Mr. *Wilkinson.*] A slight modification of this clause could be made.

Mr. *Hope Scott.*] This has been the subject of legislation before, and perhaps you had better leave it to the River Lee Company to explain their case, before you alter the clause.

Chairman. We understand the substance of the thing; we are not going to put into the Bill the New River, but we are going to put in that part of the Mainfold Ditch which flows into the River Lee, and which properly comes under the Bill.

Mr. *Hope Scott.*] The only question between us is, whether the language of the 3rd section does that or not.

Chairman.] The Counsel will take care so to frame the clauses as to meet that.

Mr. *Wilkinson.*] We must be cautious to protect ourselves against any liability to maintenance.

Sir *George Bowyer.*] If it is excluded from the Act, you cannot be liable to its maintenance.

Cross-examined by Mr. *Round.*

269. Mr. Hope Scott has asked you as to certain new works which the New River Company made, and which communicate with the Mainfold Ditch.

Mr. *Hope Scott.*] The Mainfold Ditch is, in part, used as the pure water channel of the New River; it is that part which is excepted here; the other part is not.

270. Mr. *Round.*] Then the sewage, which now comes down the Mainfold Ditch and through it into the river Lee, is the sewage deodorised at Hertford?—It is the effluent water passing away from the deodorised sewage of Hertford.

271. Do you see any reason why, in a sanitary point of view, that part of it should be excluded.

Chairman.] We have agreed that it is to be in the Bill.

Cross-examined by Mr. *Cripps.*

272. Was your inspection of the River Lee above Hertford on one occasion only, or have you made visits from time to time?—The whole Bill being prepared, I was directed by the Board of Trade to make an inspection of the river. I have been twice to Hertford.

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273. I mean above Hertford?—I went from Luton to Hertford on one occasion, that was some time in March; about the 23rd of March; I was engaged then on it.

274. In the present year?—Yes.

275. Did not you find the river, above Hertford, a clear, bright, flowing stream?—The river generally, you mean.

276. Yes?—Not as bright as could be desired.

277. Did you find it a clear, bright stream?—I should not call it a bright stream.

278. Your inspection was in March?—Yes.

279. You mentioned some places above Hertford; but all those places that you have mentioned are as much as seven miles above Hertford, are they not, whether on the Mimram or on the Lee?—The places that I have mentioned above Hertford more particularly, were Hatfield and Wheathampstead.

280. You have mentioned nothing specially above Hertford, either on the Lee or its tributary the Mimram, which is not more than seven miles above Hertford?—Welwyn is seven miles above Hertford.

281. By the river it is as much as eight miles?—Hertingfordbury is a great deal nearer to Hertford.

282. Hertingfordbury is a small place?—Hertingfordbury has 799 inhabitants.

283. Is not it the case that the river, from Welwyn, which is on the tributary of the Mimram, to Hertford, passes nearly all the way through Lord Cowper's property?—Yes; the Mimram is a brighter stream than the Lee. I do not mean that you may not have a bright stream still in a very bad state.

284. Taking the main stream of the Lee, how far is it by the river from Hertford to Hatfield?—About seven miles.

285. In those seven miles the river is a somewhat rapidly flowing stream, is it not?—Not very rapid; it is nowhere a very rapid river.

286. What would you put it at the rate of?—I have not tried it.

287. At Hatfield you say the sewage is cut off from the river; how far do you have to go further on from Hatfield before you come to the other place; you mentioned Luton?—You have forgotten Wheathampstead.

288. Wheathampstead is a small village?—It has 1,960 inhabitants, that is according to the census of 1861.

289. *Chairman.*] That would be the whole parish?—Yes.

290. Mr. *Cripps.*] Do you regard Wheathampstead as a place that would justify an outlay for expensive works for the diversion of the sewage, or are the houses situated in a way in which that could be done?—All sewage, if only the sewage of one house, justifies the outlay which is necessary to divert it from the river.

291. Wherever you found a house, you would impose upon it the necessity of some system of sewerage?—Yes, I would not allow the sewage to run into the river.

Monday, 27th April 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Maxwell.
Mr. Benyon.	Mr. Powell.
Sir George Bowyer.	Mr. Sheridan.
Lord John Hay.	Mr. Surtees.
Mr. Alderman Lawrence.	Mr. Wise.

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

Captain *Henry W. Tyler*, R.E., recalled; Cross-examined by Mr. *Michael*.

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292. DID you examine the River Lee, at the points you mentioned, in any other places except those you have already enumerated?—I made a general examination by driving through the whole of the district, and paying particular attention to those particular places which are mentioned in the evidence.

293. I represent Tottenham; was your attention directed specially to Tottenham, in connection with the River Lee?—No.

294. Then you are not able to give us any information?—No, and for this reason, that Tottenham is below the intake of the East London Waterworks Company, and therefore I did not think it was necessary to direct my special attention to the question of Tottenham.

295. Tell the Committee what distance Tottenham is below the intake of the water company?—About four miles.

296. Is that the smallest distance that Tottenham empties any of its sewage water, or any water at all, from its drains into the River Lee?—I should say that is about the distance.

297. Are you aware of the scheme introduced into Parliament by the East London Waterworks Company in the last Session of Parliament?—I am.

298. What was the total amount of money proposed to be expended by the East London Waterworks Company under that scheme?—I do not remember the exact amount.

299. Have you any documents that would enable you to say?—I do not think I have.

300. Was the object of the money so to be expended to purify the river in order to benefit the company?—As to the amount of money I am not sure. I do not think I have that amount.

301. Can you tell us whether the object was not, by the execution of those works, to benefit the company by purifying the river?—There were a great many objects; one object was to get an extra supply of water from the Thames, and another object was to extend the principle of intercepting sewers, but that was omitted from the Bill subsequently.

302. Under what circumstances was that part of the Bill, which contemplated the erection of intercepting sewers, omitted?—Because a large scheme was in contemplation in place of it.

303. If that scheme of intercepting sewers had been carried out, would the expense have fallen upon the East London Waterworks Company?—Certainly.

304. And if this Bill is passed will the effect of it be to remove that expense from the East London Waterworks Company?—No. I apprehend that if this Bill is passed, the East London Waterworks Company will have to pay a contribution towards carrying out the works required.

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305. But under this Bill will it be necessary for the East London Waterworks Company to construct any intercepting sewers?—No, only to provide funds with a view to the better conservancy of the river generally.

306. What amount of funds are proposed to be contributed by the East London Waterworks Company for that purpose?—That I do not know; I do not know that it is settled yet.

307. This Bill contemplates the prevention of any sewage matter, under any circumstances, after a certain time, running into the River Lee?—Yes.

308. And therefore to that extent must benefit the water companies who take the water, in preventing the necessity for their expending any money for that purpose?—I do not know that. It will benefit the water companies as well as the water drinkers. The water companies will derive a good deal of benefit in not requiring to filter the water to the same extent that they are obliged to do at present, but the principal consideration will be the benefit to the water drinkers.

309. Let me recall to your mind this: if it was necessary in the last Session to expend a large sum of money for intercepting sewers, that was to cut off sewage water from getting into the river?—Certainly.

310. For the benefit of the company?—And the water drinkers.

311. For the benefit of the company being able to supply a purer article?—Yes, and for the benefit of those who had to drink that purer article.

312. That, of course, is the ultimatum; but the company would benefit under this Bill in not having to expend that money?—If you can say it is a benefit to anybody in not having to do anything.

313. If the water companies are relieved from the necessity of spending their money, is not that an absolute money benefit conferred upon them?—If they are relieved from any such necessity, yes.

314. Supposing that the deodorised sewage matter is turned into the River Lee, four miles below the intake of the water company, how does that influence the pure supply of water?—It does not influence the pure supply of water.

315. Then I may take it from you, that the deodorised sewage matter turned into the River Lee will not in any way injure the water companies?—Turned into the River Lee at Tottenham.

316. At Tottenham?—It will not injure the water companies.

Cross-examined by Mr. *Sargood.*

317. With reference to Luton, when did you make your examination there?—Sometime before the end of March; I will give you the exact date if you want it.

318. March 1867?—No, March of this year.

319. The present year?—Yes, 1868.

320. How long were you there?—I went to Luton on the 23rd.

321. Is that the only visit you paid to Luton?—That is the only visit I paid to Luton.

322. May I ask you how long you were at Luton?—I do not know the exact time that I got there; I went there by the morning train and I got there in the afternoon, and I went round the sewage works and drove up to Leegrave Marsh.

323. Did you remain there a couple of hours?—More than that; I came back in the evening, and walked round the town, and went to look at some manufactories.

324. How long do you believe you were occupied in your inquiries?—In the neighbourhood?

325. At Luton?—At Luton itself; I slept there all night.

326. You might not have been inquiring there all night; I only want to know how much time you spent there?—I do not know exactly; I got there, say from one to two o'clock, and was there up to nine o'clock at night; during that time I drove to Leegrave Marsh.

327. If I understand you, you devoted seven or eight hours to the investigation

tion of the Luton pollution of the river; is that what you mean?—Including the drive to Leegrave Marsh.

328. March did not give you very much light up to nine o'clock at night?—I was going round some of the manufactories after dark.

329. I see that the other day you stated, in answer to Question 197, that the effluent water which you saw passing off by the long channel into the river, north of Mr. Lee s works, was in a muddy condition; did you say "muddy" or "milky"?—I think I said both milky and muddy.

330. I thought I heard you say milky; would not that happen necessarily by the lime process to which it had been subjected?—I dare say it would, to some extent.

331. Are you one of those who differ from Dr. Letheby, or do you agree with him, that common sewage will be almost purified by transit through seven or eight miles of river?—The farther it got the better it would become, no doubt.

332. That is almost a truism, but I ask you whether you agree with Dr. Letheby that the transit of seven or eight miles through the river will almost nullify the impurity?—Certainly not in all cases.

333. Is there anything particular in the River Lee in the neighbourhood of Luton which would prevent its doing so there in the course of seven or eight miles?—I should not say it would be almost purified; it would be improved in condition; I will go as far as that.

334. Do you agree with Mr. Rawlinson, who told us the other day that that which we were doing got rid of about nine-tenths of the impurity; that process of liming?—I should not like to tie myself to any exact proportion of impurity; it depends upon whether the process is carried on from day to day.

335. But you are the gentleman who went to Luton, and devoted three hours to inquiry, and therefore having regard to the process being carried on there, do you agree with Mr Rawlinson, that we do get rid of perhaps nine-tenths of the impurity?—I cannot say any particular proportion.

336. Will you give us eight-tenths, or anything else?—I should not like to tie myself to nine-tenths, because it must be the result of chemical investigation, carried on for a long period, to see what the average was.

337. Do you think we get rid of a great deal of the impurity?—You deposit nearly all the solid matter.

338. Do you think we get rid of the major part of the impurity?—Yes.

339. What is the distance from Luton to the highest point at which either of the companies take water?—Something like 20 miles, I suppose it must be, from Luton to Hertford, by the river.

340. Now, I suppose you will admit to me, that having got rid of the greater part of the impurity by the liming process, that there is none of it left by the time it reaches the end of that 20 miles?—I will not say none of it left.

341. In your opinion, is any of it left by any possibility?—I think it is quite possible that some of it may be left.

342. Then how do you reconcile that with what you have just told me, that you think the best part of the impurity may be got gid of in seven or eight miles; you believe we get rid of the major part of it before we get into the river at all, and yet you do not think that we get rid of the rest of it in 20 miles?—I will not say that it is all got rid of in 20 miles.

343. Is it your belief that the small part of the impurity which is left after it has gone through the liming process, does by any possibility affect the purity of the water at the point where the companies take the water?—Provided there is any of it left, then so far it affects it at the point where you take the water.

344. Provided it is there, it affects the water, but the question that I put to you is, do you believe there is any of it left?—I should be sorry to say that I was of opinion that it was all gone.

345. I think you would be still more sorry to say that you believed that any of it was there, would not you?—No, I should not.

346. You are rather inclined to think, notwithstanding Dr. Letheby's evidence and Mr. Rawlinson's opinion, he giving only a tenth, that some of it may be there?—A certain portion of it, which may be put in at Luton, may be still in at Hertford.

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347. After a 20 miles' run?—Yes, after a 20 miles' run.

348. That is your opinion?—That is my opinion.

349. Then, I suppose, you think in the interest of the metropolis and of the water companies, that that infinitesimal dose which you speak of ought to be got rid of at the expense of Luton?—It is not only with reference to what is going on at Luton now, but what may go on at Luton hereafter; and not only at Luton, but there are large populations all the way down from Luton.

350. I am not discussing them?—But I must look at it from my point of view.

351. I am requested to ask you one more question with regard to the sewage that you referred to at Cheshunt, at question 246; did you yourself inspect the cesspools there?—No; I did not.

Cross-examined by Mr. *Wilson*.

352. Now you have already answered the learned Counsel who made inquiries of you on behalf of Tottenham, that you did not think the discharge of matters into the river at Tottenham, being four miles below the intake, would prejudice the water?—No; it would not do so.

353. Then I may take it almost *à fortiori*, that matters discharged seven miles still lower down, can less affect the water; that almost follows as a mathematical problem?—Certainly.

354. And if in the interim, during that seven miles between those two places, there are several locks to stop the transit of the water, that would still further lessen the probability of contamination?

Chairman.] You need not pursue that, because they are prohibited by their Act from taking water from that part of the river, or below a certain point.

Mr. *Wilson.*] You do not quite see the point to which I want to direct your attention now. The object I have now is simply with regard to the body I represent, one which you will better understand if I submit a plan to you.

Chairman.] It is not necessary to enter into a discussion upon that. It is a matter of fact that they are prohibited from taking water from that point.

Mr. *Wilson.*] From what point?

Chairman.] From down below the intake.

355. Mr. *Wilson* (to the *Witness*).] Again, still bearing in mind that the course of the stream is always downwards, that would render still less the possibility of any contamination of the water of the companies taking place at West Ham?—What will lessen?

356. The stream from Tottenham?—Yes.

357. Taking those facts together, do you believe that anything which could come into the Lee at West Ham can at all affect the question of the water supplied to the two companies?—Certainly not.

358. I do not know whether the learned gentleman here asked you that question of whether you assented generally to the view taken by Mr. Rawlinson, that after the deposit of sewage matter, there is very little deleterious matter left, without going into minute proportions?—I would not say very little.

359. Then you do not adhere to the view expressed by him?—Mr. Rawlinson gave you a particular figure, nine-tenths, as the proportion; I will not adhere to that figure at all, because it depends upon the process from day to day.

360. As I understand you, in your answer to the learned gentleman, you did not adhere to Mr. Rawlinson's figures; but do you adhere to his opinion, that very little deleterious matter is left?—I would not say very little.

361. Are you aware of the pumping system of West Ham at all?—No, not at all.

Mr.

Mr. *Wilson*.] It would very much simplif ythe matter, which I have no doubt the promoters would be glad to do as well as myself, if I submitted to the Committee a plan which I have here, upon which they would better understand the question.

Chairman.] I believe the Committee perfectly understand the question, you need not produce it.

362. Mr. *Wilson* (to the *Witness*).] Are you sufficiently acquainted with it to know how far the present outlet of the sewage of West Ham is from where the Lee debouches into the Thames?—No, I am not.

Mr. *Wilson*.] I submit this plan for the information of the Committee.

Chairman.] You can produce the plan if you wish it.

363. Mr. *Wilson*.] It is the more important, after the information which was given by the promoters the other day (quite unconsciously, no doubt), which was distinctly wrong; I want to show that the promoters have fallen into a mistake. (To the *Witness*.) Assuming, which we will prove, that that is the River Thames (*pointing to the map*), and that the outlet of the West Ham Board is here; and just up to there do you see any particular objection to the West Ham Board being permitted to pump their effluent water into the Lee at that spot after the process of deodorization, and all that modern science can do, by way of rendering the sewage water innocuous?—With reference to the water drinkers there is no objection, as far as the water drinkers are concerned, but it is another question whether it is not desirable to carry all sewage water, whether water running off or solid matter, further away before you get rid of it.

364. Bearing in mind, you yourself not being practically acquainted with West Ham, and Mr. Rawlinson being so acquainted, and bearing in mind his answer, that it is absolutely necessary that the effluent water from the district must be pumped out this river between here and there; do you see any particular objection to its being pumped in at that spot?—I do not think Mr. Rawlinson said anything of the sort. I am quite sure that Mr. Rawlinson could not have said any such thing.

365. Mr. *Wilkinson*.] Perhaps you will point out what Mr. Rawlinson did say?—I am placed in considerable difficulty, having no place to put my papers, otherwise I could refer to the question.

Chairman.] Never mind, go on.

366. Mr. *Wilson* (to the *Witness*).] Assuming that it is necessary to pump out the effluent water from West Ham into this river or that river, whether the River Lee or the other river, can you see any particular objection to it being pumped out at that spot?—I cannot see that it is necessary.

367. I request you to answer the question on that assumption; I will prove it by other parties, but assume that fact?—Assuming that it is necessary to pump it into the Lee at that point.

368. Assuming that it is necessary to pump it into the River Lee or the Thames, can you see any practical objection to its being pumped in there?—The practical objection would be to its being pumped in at a point higher up than necessary; the further it goes before it enters the stream the better.

369. Assuming, first of all, that the Conservators of the Thames have refused permission, or that it cannot be got; and, secondly, that it would cost 25,000 *l.* to do it, do you know of anything that will compensate for the expenditure of that 25,000 *l.* by its being pumped here or there?—It might be pumped there and done away with.

370. That is no answer to my question; I ask you if you see anything that will compensate for the expenditure of 25,000 *l.*, by pumping it there instead of pumping it there (*pointing to the map*); I request an answer to that question?—Yes, there is something that will compensate, and that is the increased purity of the water up there.

371. Where?—There, at that point.

372. Which is 11 miles below any intake of the water companies?—I say with reference to the water companies, there is no doubt it would not do the least harm to put it into the river at that point.

373. But who will it do any harm to if a certain amount of effluent water is

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discharged here instead of there?—Any impurities that get into the Lee when it has been purified, will do some harm.

374. Upon whom?—To the inhabitants in the vicinity of the Lee.

375. Assuming that there are no inhabitants living within half a mile, what then; you have described it as being very little?—I distinctly have not described it as very little.

Chairman.] Where is the tidal lock?

376. Mr. *Wilson.*] There, Sir (*pointing out the same*); it is within something like three quarters of a mile of the mouth of the Lee. (To the *Witness.*) That is the only objection you see to it, that it might give a little extra impurity up here, to what it might here; the effect would be upon any parties living here, instead of upon parties living there?—Quite so.

377. Do you think that the difference of that advantage would be fairly compensated by the expenditure of something like 25,000 *l.*?—It is a nice balance to say how much impurity there is, and how much payment would compensate for it.

Re-examined by Mr. *Wilkinson.*

378. With reference to this suggestion as to the outlet, I gather your answer to be this, that it is desirable to prevent the ultimate outlet from being tied, as it now is, and that you should take it lower down the stream?—The further you can take the impurities the better.

379. And as part of the general plan for draining the whole district of the River Lee, is it not desirable that this portion of West Ham should be included in it?—It appears to be so to me; there is at present no proper conservancy over that or any other part of the River Lee; to my mind, a river running through a vast population, the greater part of the water of which is consumed, and, in fact, every drop of which is consumed, at certain times, by the population of London, ought to be conserved by some proper authorities, from year to year, and it is an indefensible state of things that it is not so.

380. And there is no exceptional case in West Ham itself, to make it desirable that that should be left out of the jurisdiction?—I do not think that West Ham or any other part of the Lee should be excluded from such conservance.

381. If we, as the Conservators of the Lee, were to consent, how far would the Conservators of the Thames allow a discharge to take place?—I am not here to answer for the Conservators of the Thames.

382. Would it be consistent with the duties of the Conservators of the Thames to allow such a discharge to take place at such a point, as is now shown by the map?—Not if they could help it.

383. With regard to the state of the stream, if the water from the upper sources of this watershed may be clarified in some measure by its progress, is it not a fact that there are many other sources of pollution which affect the river at West Ham?—No doubt there is a great deal runs into the river in that neighbourhood.

384. With regard to Luton; did you, when you were there, apply sufficient time to your examination to satisfy yourself that what you have stated is really the position of things at present?—I did.

385. So far as the state of the river is concerned, and the impurity which exists there, are you aware, or not, of the evidence which was given before the Commission by Mr. Tomson, of Sutton; has your attention been called to that?—I believe I looked through it.

386. Mentioning particularly that the typhoid fever was the result of the state of the water at that part of the river; and was your attention also called to the evidence of Mr. Willis with regard to the poisoning, by oxalic acid, consequent upon the manufactures of the town?—Yes.

387. Do those causes of pollution still exist as they did heretofore?—Quite so.

388. And is it not likely that the increase of the business of the town in its peculiar commerce of straw plaiting, that source of pollution should increase also?—It is not only in the increase of the business of the town, but also in the increased amount of sewage running into the river, or treated there; because, as I said

I said before, only one-third of the town is at present sewered, and it is in contemplation to complete the rest of it as soon as the water supply is sufficient.

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389. That would increase the sewage threefold?—Yes.

390. One word with regard to Tottenham; were you concerned in the examination with respect to the East London Waterworks Company?—I was; I made a special inquiry upon the allegation of certain householders and inhabitants of the East London Waterworks district.

391. Are you aware that, on that occasion, the inhabitants of Tottenham presented a petition, opposing the East London Waterworks Company's scheme, and in that petition stated that a better scheme than that proposed by the Bill could be, and had been, suggested for the purification of the water of the River Lee; that the subject of such purification had been under the consideration of the petitioners and the local Board, and they, together with several sewer authorities of the adjacent districts, some time ago, instructed an eminent engineer to report as to the best means of draining, and intercepting, and disposing of the sewage of the district comprised in the valley of the river, so far as the works of the company were proposed to be extended?—That would probably be some petition against the Bill of last year.

392. Are you aware that the Tottenham Board of Health consulted Mr. Bazalgette the engineer, and that he proposed a plan for conveying the sewage right away to the Thames, by an independent parallel channel, without putting it into the Lee at all?—Yes; I am aware that some scheme of the sort was proposed.

Mr. *Michael.*] I must object to this line of re-examination; my cross-examination was stopped, by the fact that Captain Tyler said that he was not conversant with the circumstances connected with Tottenham; I stopped the line of cross-examination, and my learned friend is now beginning to examine as to Mr. Bazalgette's scheme for Tottenham.

Mr. *Wilkinson.*] I am not at all going into the merits of the scheme.

Chairman.] All this is irrelevant to the question now before us, and I should have stopped the learned Counsel if I had seen it in time. We are upon the question of the extension of the jurisdiction to the non-navigable streams, and this is a question upon the navigable streams which is not properly before us now.

[The Witness withdrew.

Professor *John Thomas Way*; Examined by Mr. *Wilkinson.*

393. I BELIEVE you were formerly Consulting Chemist to the Royal Agricultural Society of England?—I was.

Professor *J. T. Way.*

394. And you were also a member of the Royal Commission on Sewage, and of the Commission for Inquiring into the best means of Preventing the Pollution of Rivers?—Yes.

395. As one of the commissioners on the Pollution of Rivers Commission, you inquired particularly into the valley of the Lee, did not you?—We did.

396. Were you present at the meetings for the examination of witnesses, which are embodied in this report?—Yes, at all of them.

397. I need not ask you whether this report contained the conclusion at which you arrived, and whether you have seen anything since the publication of this report, to alter or modify those views?—No; I should equally sign the report now if I had to sign it.

398. Have you read the Bill which is under the consideration of the Committee?—I have.

399. And you have particularly considered that clause of it which requires that the whole watershed of the Lee and its tributaries should be placed under the jurisdiction of a conservancy?—I have, generally, and I believe it to be quite right that the whole watershed should be placed under a conservancy.

400. Have you heard Captain Tyler's evidence, and do you concur in that evidence as to the present state of the River Lee and its tributaries?—Yes; generally, certainly, quite.

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401. I believe, in the spring of 1867, you visited the various tributaries which contribute to the Lee?—Yes.

402. And did you find the water of those tributaries very much in the state in which Captain Tyler has described them to be?—Yes.

Chairman.] We have got his Report.

403. Mr. *Wilkinson.*] From what you know of the valley of the Lee, do you think that there would be difficulties in dealing with the sewage of most of the towns and villages upon it by irrigation upon the land?—I think that the valley of the Lee is peculiarly well suited for such a mode of distribution of sewage.

404. If that mode should be applied, I presume that would get rid of any other description of refuse as well as sewage?—It is the only means of effectually getting rid of the sewage by irrigation.

405. Suppose that process not to be adopted, what other mode would you suggest for the protection of the water, as far as practicable, from impurities?—I would take, as a secondary measure, in cases where it was impossible or impracticable to distribute the sewage, great care that the sewage should be precipitated and, if necessary, filtered before being discharged into the stream—precipitated by lime, or iron, or some other substances which are well known to chemists.

406. Dividing the valley, and taking first of all the portion which is above the intake of the water companies, do you conceive that the sewage could be readily got rid of by the first of the processes—by irrigation and application to land?—I believe so, certainly.

407. With regard to the second division, that which is below the intake, do you think that if that could not be entirely got rid of by irrigation, some standard of purity could be obtained by means of filtration?

Chairman.] What part are you speaking of?

Mr. *Wilkinson.*] Below the intake.

Chairman.] We had better not go into that.

408. Mr. *Wilkinson.*] Very well, Sir. (To the *Witness.*) I believe your attention was called to the mode of disposing of the sewage at Hatfield, was it not?—Yes.

409. That is, by causing it to sink and soak away into the porous subsoil of chalk?—I think that that is a very objectionable way.

410. Would not the necessary result be that it would poison all the wells in the district?—Fortunately it is not easy to do that, as it will not sink in very large quantities into the chalk.

411. Supposing it did sink, it must have that result?—It would destroy all the deep wells.

412. Mr. *Powell.*] I wish to know whether any difficulty arises in the disposal of the sewage by irrigation, in case of a long period of frost when the ground is hard?—No, on the contrary; for instance, at Croydon there are 25 or 30 acres upon which the sewage is thrown; and while the snow is lying upon the ground, the sewage water being upon the 25 acres, entirely prevents the settling of the snow there; it keeps the ground much warmer than the ground is usually—sewage is all warm.

413. The sewage water spread over the land by way of irrigation never becomes frozen, so as to be offensive to the neighbourhood?—No, the temperature of the water passing off from Croydon for instance is higher considerably than the temperature of the air.

414. The ground upon which the sewage is poured?—Yes, it never freezes.

415. Mr. *Maxwell.*] Are most of those towns along the river supplied with water?—Some of them are, but not well supplied; most of them are badly supplied with water.

416. Will the irrigation be affected by the supply that exists?—There is a great deal of subsoil water in the valley of the Lee, and the Thames, which gets into the drains and which can always be made use of, and which it is difficult to separate.

417. Are those small towns supplied with water from the River Lee at all?—Some of them are.

418. Some of them low down the river?—I do not know; I think the town of Hertford is supplied from the Lee.

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419. Is Luton supplied from the River Lee?—I am informed that it is supplied from a well.

420. Mr. *Denison.*] I wanted to hear the towns that are supplied from the Lee?—I can hardly tell you without referring to the Report. (*The Witness referred to the Report.*) I see that the supply of Hertford comes from the Lee; the whole supply used to come from waterworks upon the Lee. A few years ago new waterworks were established, and the water is now taken from a well in Hartham.

421. How is the town of Ware supplied?—I really cannot tell you without reference; I do not remember how those towns are supplied.

422. Mr. *Maxwell* (to the *Witness*).] In your report, you referred to the pollution of water from sheep-washing?—Yes.

423. How is that to be remedied?—It is stated that sheep-washing goes on down every tributary; at every one of the different farms that would be naturally so.

424. How long is that impurity arising from the sheep-washing likely to continue in the stream?—I should not place very great stress upon that subject at all.

425. But it is put here in the report?—

Mr. *Wilkinson.*] It is Mr. Garrett's evidence, at page 176 of the Minutes of Evidence.

Witness.] I think it would be quite right that the washing of sheep in a river, or the tributaries of any river, the water of which is drunk by the population of London, should be regulated in some way or the other, but I think that that is a matter of detail that will necessarily come under the Conservancy in the relations between the Conservancy and the parties interested at a future time; I do not suppose it will be proposed altogether to interdict the washing of sheep.

426. Mr. *Wilkinson* (to the *Witness*).] With reference to the question put by the Honourable Member, may I call your attention to a passage in the report. At page 11 you say, "The preparation used for dipping sheep contains arsenic, and when sheep come to be washed, months after they have been dipped, the poisonous ingredients, it would appear, remain in the wool sufficient to make the water for the time unwholesome for fish to live in;" is that so?—No doubt we had evidence to that effect.

[The Witness withdrew.

Mr. *Lewis Angell*; Examined by Mr. *Wilson.*

Mr. *L. Angell.*

427. Are you Surveyor to the West Ham Local Board of Health?—I am.

428. The drainage plan of West Ham was not done under your superintendence at all, was it?—No, it was Mr. Rawlinson's design.

429. But still you are generally acquainted with the features of it and its difficulties?—Yes, thoroughly.

430. Is it within your knowledge that the Board has been applying to the Metropolitan Board of Works to be taken into their system?—Yes; we have applied to the Metropolitan Board of Works during my term of office, and also I know by hearsay before my time.

431. Did you get a definite answer about three weeks ago from that Board?—Yes, I had a decided answer from Mr. Bazalgette, that they could not take us in, under any circumstances.

432. *Chairman.*] By not taking you in you mean that the Board said they could not take your sewage into their main culvert?—That they should not take our sewage into any portion of their system.

433. Mr. *Wilson.*] They expressed sympathy with our position, but said it was beyond their power?—Yes.

434. That you got from the Chairman?—Yes.

435. Is there any other mode by which we can get rid of our sewage—any other mode within reasonable bounds, except going either into the Thames or into the Lee?—I know of no other mode.

436. Sir *George Bowyer.*] You mean the sewage?—Yes; the sewage must

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go either into the Thames or into the Lee; at present we discharge into the Lee.

437. Mr. *Wilson.*] Are you aware that an application has been made to the Board of Conservancy of the Thames for leave to pump our effluent water into the Thames, after depositing the solid matter?—We made an application to the Conservancy, and offered to construct filtering tanks, to their satisfaction, provided they would take our effluent water, and they refused that permission.

438. Supposing even we could get that permission, and had to carry it out, would it not be necessary for the purpose of effecting it, to carry our pumping station and all our works across some two miles, as the crow flies, on the banks of the Thames?—Yes.

439. What would be about the cost of such an operation as that?—About 30,000 *l.*; we have already spent 100,000 *l.* in draining.

440. Are you conversant with the principles of sewage deposit tanks, and matters of that kind?—I am.

441. In your judgment, assuming of course that the present discharge of sewage were stopped, and deposit beds put upon the spot where the present works stand, would it be practicable to discharge the effluent water into the Lee?—It would be quite practicable.

442. Do you see yourself any objection to discharging it into the Lee at that spot?—I see no objection at all.

443. Do you see that any disadvantage would occur from discharging the effluent water there instead of discharging it lower down, where you say it would cost 30,000 *l.*?—I cannot see any practical difficulty.

444. Can you see anything whatever to compensate anybody for the extra expenditure of 25,000 *l.*?—Not at all, if we discharge the sewage.

445. That is assumed in both the cases; I am assuming that if the sewage is pumped here it must be deodorized, and if taken down the Thames it is deodorized; I am asking simply, assuming the same works taken a certain distance off, is there any advantage to be gained by that enormous outlay?—I can see no advantage whatever, but great disadvantage to us in point of expense.

446. Twenty-five thousand pounds; are you aware of the position of the Victoria Docks, that lie here?—Yes.

447. Are you aware that they are also owners of land beyond that, by which they intend to carry their system of docks along here?—Yes.

448. Would it not be necessary in carrying that enormous long sewer along here down to that new station, to have a syphon, and considerably difficult engineering works with a view of going under the docks?—Yes; we should have to provide a syphon, which would be a very costly process.

449. The dock company being actually in possession of this land at this time?—Yes; and they would probably object to our doing it that way at all.

450. Now, upon the other point, you are aware that the district termed Silvertown, round here, is at present undrained?—Yes.

451. And that they are promoting a Bill in the present Session of Parliament to have that district drained?—Yes.

452. Which has not been drained hitherto?—No; simply because we have no outfall, and they have threatened to take our present one away.

453. Assuming that we retained our interest in the present outfall to the extent of its effluent water, would there be any difficulty then in properly draining Silvertown?—None whatever.

454. And getting rid of the application to Parliament?—No.

Cross-examined by Mr. *Davison.*

455. You are opposing that Bill, are you not?—Yes; we are opposing their taking a separate jurisdiction.

456. Why should they not sewer Silvertown?—Because it is part of our district.

457. But you do not sewer it?—We are anxious to do so.

458. Have you done anything towards doing it?—We have submitted plans to the Conservators of the Thames.

459. What

459. What did the Conservators of the Thames say?—They refused to admit it.

460. You object to Silvertown draining itself, although the Thames Conservancy object to your draining it?—There is a legal question of rates involved, which I am not competent to give evidence upon.

461. However, you are opponents of the Bill?—Yes.

462. At present you pump the whole of your sewage into the river Lee?—A portion of it. We pump a portion of it, and another portion of the day it goes by gravitation.

463. But the whole of it goes in?—Yes, the whole of the sewage goes into the Lee.

464. Sir *George Bowyer.*] Deodorised sewage?—No, not deodorised at all.

465. Mr. *Davison.*] You do not deodorise it at all?—No.

465.* You pump it in just as it is, pure and simple?—Yes.

Mr. *Denison.*] That is what they mean by effluent water.

466. Mr. *Davison.*] What is the present population whose sewage is pumped in?—The population, I should say, is between 30,000 and 40,000; that is at present pumped in.

467. Shall we say 40,000?—The whole of the sewage is not going into the sewers at present, but you may say 40,000.

468. I am told that there are about 30,000 water-closets; is that so?—Possibly; I do not know the number.

469. It all goes in?—Yes, it all goes in.

470. And that under temporary admission at present?—Yes; I do not know how it goes in.

471. You have no legal power, you know?—I am not aware at all.

472. Are you liable to be stopped by the Thames Conservancy?—Possibly; but that is beyond my knowledge.

473. Then how can it matter to you whether you are to be stopped by the River Lee Trust, or by the Thames Conservancy?—We are not stopped at present.

Re-examined by Mr. *Wilson.*

474. With regard to the drainage of Silvertown, we are opposing the Bill because that Bill proposes to cut off a district which pays the West Ham district a rateage on 25,000 *l.* a year of rateable property?—Yes; that is the estimate.

475. You took the number of houses last week in Silvertown, did not you?—Yes.

476. Can you tell the Committee what was the result?—About 222 houses.

477. Then for the purpose of draining 222 houses at Silvertown the Bill proposes to cut off property to the extent of 25,000 *l.*?—Yes.

478. Are you aware that a considerable sum of money has been borrowed on the security of the rates of West Ham, including that 25,000 *l.*?—Yes.

479. Therefore, if that Bill were to pass, the payment of those loans would devolve upon the other portion?—Yes.

480. Is that, to your knowledge, one of the main grounds upon which we object?—That is so.

481. Mr. *Powell.*] What is the rateable value of West Ham?—£. 170,000, I think, or thereabouts.

[The Witness withdrew.

Mr. *Pember* was heard in support of the proposition, that there should be seven members on the new Board to represent the River Lee Trust.

Mr. *John Marchant*, junior; Examined by Mr. *Pember*.

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482. You are Clerk to the River Lee Trust?—I am.

Chairman.] We have the papers relating to the River Lee Trust before us.

483. Mr. *Pember.*] Are they accurate returns?—They are.

Chairman.] It will be material to know what class of trustees have principally attended.

484. Mr. *Pember.*] Will you answer the Chairman's question as to who the trustees were who used to attend?—Those who chiefly attended the meetings of the trust were the county magistrates of the three counties, namely, Hertford, Middlesex and Essex; those who were in the habit of attending the bench of magistrates.

485. Can you point to any other class of gentlemen who have attended the meetings?—No, I think not; There is one trader who has attended, Mr. Page, of Ware; he is the largest maltster in England, I believe; he is one of the principal traders in the Lee.

486. Are any of those whom you designate as county magistrates traders?—I think not, in any case; they may be interested in the trade or the river; of course the navigation adds a material value to their property, and in that sense they are interested very largely.

487. Have the representatives of the New River Company ever come?—Not within my knowledge.

488. Have any representatives from the Corporation of London ever come?—Yes, the aldermen of London frequently attend; we had a meeting this morning, at which three or four aldermen attended.

489. Are any of the other *ex-officio* members in the habit of attending?—The members for the county of Hertfordshire attend; the members for Essex have not been in the habit of attending very much.

490. Those persons who have been in the habit of attending are persons resident in the neighbourhood; persons whose property is lying near to the Lee, and which has been benefited by the navigation?—Yes.

491. In your judgment, is the navigation a great benefit to the neighbouring lands?—I should say so, unquestionably; and to all the towns and villages through which it passes.

492. How far is Ware dependent upon the navigation?—Ware has maltings situated upon the banks of the Lee, which have sprung up in consequence of the water communication afforded by the navigation.

493. Ware is almost entirely a town of malting?—Yes.

494. Is there any other staple trade at Ware?—Malt is the chief one.

495. And that malt nearly all goes by the Lee?—Yes.

496. It is suggested that there is a large brick making establishment?—Yes, that is between Hertford and Ware.

497. That the traffic of all goes by the river?—Yes; in fact there is no communication in any other way except by road; the brick fields, to which you allude, has a branch of its own.

498. You gave evidence before the Rivers Commission?—Yes.

499. And you gave evidence on the importance of the navigation?—Yes.

500. Without taking you through that evidence, do you adhere to the evidence you there gave?—Yes; I do thoroughly.

501. The trustees are not paid; they are an unpaid commission?—Yes; even their expenses are not paid.

502. They had devoted themselves for a series of years to the improvement of the state of the river and the navigation?—Yes.

503. I believe very large works have been constructed?—Yes.

504. Has the channel been deepened?—Yes.

505. I think it is a fact that once, 10 years ago, you could only take a 40-ton barge up the river?—Yes; it was a 40-ton navigation.

506. And now it is an 80-ton navigation?—Yes; up to Hertford.

507. What was the state of the banks, the locks, and so on, along the river, when

Mr. *J. Marchant*, jun.

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when those improvements began?—At that time the locks were in a very dilapidated condition; the banks had been raised instead of the river being deepened; and I believe, according to Mr. Rendell's opinion, the means of improvement had reached its limit; and the navigation was in 1850 in jeopardy in consequence.

508. You have renewed your locks and enlarged them, have you not, to take larger craft?—Yes; locks dilapidated and built of timber have been removed, and stone and brick structures of larger dimensions put in their stead.

509. And you have also straightened the bed of the river?—Yes.

510. The effect of all this has been, has it not, to increase the receipts from the tolls very considerably?—Yes.

511. The aggregate receipts have increased, while the tolls have diminished?—Yes, the tolls of commodities have been reduced, whilst the revenue has almost doubled itself since 1851.

512. That has been in spite of a diminution amounting in many cases to 50 per cent?—Yes.

513. What was the number of tons carried on the navigation in 1851?—In 1851 the number of tons carried on the navigation was 212,633.

514. And the amount of tolls received from that was how much?—£.5,798.

515. What was the tonnage in 1866?—Three hundred and ninety-three thousand, seven hundred and eighty-eight.

516. And the amount of tolls received?—£.11,581; nearly double.

517. One word with regard to the borrowed money; those permanent works which you have carried out have been carried out principally with borrowed money?—Yes.

518. You took powers under the Act of 1850 to raise 230,000*l.*?—Yes.

519. And you have raised 178,000*l.*?—Yes.

520. At interest varying from 4½ to 5 per cent?—Yes.

Chairman.] We have all the tolls and everything at page 146 to 148 of the second Report; you need not go any further into that.

Cross-examined by Mr. *Denison.*

521. I will not go into anything in the Reports, but did the promoters of the Bill come to you, or did you go to them about this matter?—I hardly know which it was; we published a notice ourselves in the papers of our intention to apply to Parliament.

522. For a Bill like this?—Somewhat like this; the notice is probably before you.

523. No; if you have it I will be glad if you will show it me?—I may say that it was upon the basis of the River Commission Report.

524. Did it contain a constitution?—Certainly.

525. What constitution did it contain?—The passage relating to the constitution is as follows: "If need be to dissolve the said Trustees of the River Lee, and to re-incorporate them by the same or some other name, or constitute them, with or without other persons, into another and a different body, corporation, or commission (hereinafter referred to with the said Trustees of the River Lee, as 'the said Trustees'), as Parliament may see fit, and to confer upon and vest in the said Trustees of the River Lee, or the newly constituted body, the bed, soil, shore, and banks of the River Lee and its tributaries, or any part or parts thereof respectively, and all other the property, rights, powers, and privileges now vested in the said Trustees of the River Lee, and further to provide for the conservancy of the River Lee and the River Stort, and the several tributaries of the same respectively, including therein the rivers and streams known as the Mimram, the Beane, the Rib, the Quin, the Ash, the Pincey Brook, the Cobbin's Brook, the Turkey Street Brook, the Edmonton Brook, the Salmon Brook, and the Moselle, in the counties of Bedford, Hertford, Essex, and Middlesex, or any or either of them." That is the substance of the constitution.

526. That tells us nothing of the constitution. You have the notice; what did it propose to do about purification?—To disallow the flow of sewage into the rivers Lee and Stort. To regulate and control all barges, boats, lighters, &c., using the towing paths. To remove all locks, mills, wharves, &c.,

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impeding or interfering with the objects of the Act. To alter or extinguish the rights of fishing interfering with the navigation. To enable the trustees to enter upon any lands for the purpose of inspecting and viewing the state of the drainage or sewage, and other works, and to close or stop the outlets of all or any sewers, drains, and so on, discharging sewage, drainage, or water into the Lee or the Stort. To enable the trustees to levy rates for the preservation of the banks, and the improvement of the same. To contract with the water companies, and to supply water in bulk. To become a sewer authority. To enable persons under disabilities to sell, and to acquire lands for reservoirs and works, and to alter and repeal different Acts.

527. Did that arise at anything more than notice?—No, for this reason; it was found that the Government were taking the matter up, and the trustees felt that they were not in a position to force their views as against the Government measure.

528. Having led up to that in that way, cannot you tell us which party first approached the other, because you know you did approach one another?—I know that the Marquis of Salisbury and the Duke of Richmond had conversations upon the subject.

529. The Marquis of Salisbury and the Duke of Richmond had conversations upon the subject?—Yes.

530. The Marquis of Salisbury was the Chairman of the Trustees?—Yes.

531. Did you take any part in the discussions which led to the present constitution being adopted, instead of that recommended by the Commission?—I was present at meetings of the River Lee Trust when the question was thoroughly discussed, and it was thought that seven should be the proper number.

532. Do you mean meetings of the River Lee Trust, or with anybody else?—I mean meetings of the River Lee Trust.

533. I ask if you were present at any meeting between anybody belonging to the River Lee Trust and anybody representing the Government?—Yes; a deputation of the trust waited upon the Board of Trade.

534. I guessed it was so 10 minutes ago?—This was subsequent to the matter you have been asking me about.

535. I asked you nothing about dates. What was the date of this application of the deputation to the Board of Trade?

536. Mr. *Pember.*] Was it subsequent to the Marquis of Salisbury's conversation with the Duke of Richmond?—Yes; the Marquis of Salisbury told me himself that he had had an interview with the Duke of Richmond.

537. Mr. *Denison.*] Will you give me the date of the deputation to the Board of Trade?—I think that the deputation to the Board of Trade was in December. I fancy it was in January.

538. Was there any other meeting of that deputation with the Board of Trade?—No.

539. Did you arrive at a settlement of the constitution then?—The constitution certainly was discussed at that meeting, but I do not know that it was at that meeting that the seven were mentioned; but it might have been.

540. It must have been then, or else you must have had another meeting?—The deputation only had one meeting.

541. Then I may take it that the deputation of the River Lee Trustees represented to the Board of Trade that they ought to have seven members?—You may take it so.

542. And that appears to have been acceded to?—Yes.

543. Can you tell me when it was arranged that the costs and expenses of preparing this Bill, and so on, should be paid, not by the Trustees as printed, but by the Conservancy Board out of the additional income provided by this Act; it was first printed by the trustees?—I believe it was subsequent to the deputation to which I have referred.

544. That is quite evident?—Because——

545. You need not give the because, everybody knows it must have been subsequent; had you anything to do with suggesting that the costs of this Bill should be paid by the Conservancy Board and not by the Trustees, as the Bill was originally printed?—Yes, certainly. I have told the Trustees, and everybody who has mentioned the subject, that the Trustees ought not to pay the expenses

expenses of this Bill, which is not for the advantage of the Trustees but for the advantage of other parties.

546. That looks like another meeting between the Trustees and the Government respecting this Bill, besides the one you told us of early in January?—Yes, from time to time I have met different persons, and I have always protested against the Trustees being saddled with the expenses of this Act.

547. At any of those times, which seem to have been frequent, did it occur to any of you to suggest that the water companies should be sent for to join in those discussions?—No, not to the Trustees of the Lee; it may have occurred to the Board of Trade.

548. You went there and represented that instead of five Trustees, as recommended by the Commission, you should have seven; by some pure accident it happened that those two were taken away from the water companies and given to the navigation people; it was quite an accident, of course?—It had nothing to do with me.

549. You suggested that you should have seven?—Certainly.

550. Will you contradict me in this: this is a Bill substantially arranged between the Government and the Trustees?—The Government have had the courtesy to let us see any suggestion that they were about to embody in the Bill when it touched our interests.

551. I should like an answer to my question; is not the Bill a Bill substantially arranged between you and the Government?—With regard to the navigation interests you may take it so.

552. As to another point about the contribution from the water companies; you probably had something to say upon that subject in your conversations with the Government?—What we had to say was this, that care should be taken not to saddle upon the funds of the Trustees of the River Lee any additional expenditure, because they could not bear it.

553. Anything to be done for the benefit of the navigation cannot be done out of the present funds of the Trustees?—I do not take it that this Bill is likely to benefit the navigation.

554. Will the effect of this Bill be to save some dredging?—To save dredging, yes.

555. That is becoming rather a serious expense, is not it?—In consequence of the influx of sewage, yes.

556. You said, just now, that Mr. Rendell had stated that the raising of the banks had been carried as far as it could be?—Yes.

557. I suppose your interests generally are pretty much the same as those of the Ware gentlemen, who talked before the Commission of having to go to a good deal of private expense in dredging, besides the expense to which the trustees went?—Yes.

558. Something of the same kind occurs at Tottenham?—Yes; there is an influx of sewage there. At Tottenham they discharge the sewage into the Lee, and that has formed banks from time to time, and the trustees of the Lee have to dredge that. We have an injunction against them, and possibly we shall be able to stop that now.

559. You have told us just now that your finances have doubled within 15 years; in fact, the tolls have risen in a much higher proportion than the tonnage; the tonnage has risen from 212,000 to 393,000, and the tolls have risen from 5,798*l.* to 11,580*l.*?—Yes, those are the figures.

560. The New River Company contribute 1,500*l.* a-year to you?—Yes.

561. And the East London, I think, 2,000*l.*?—Yes.

562. On the faith of those two contributions, fixed by Act of Parliament, you have been able to borrow money for the navigation?—Yes.

563. That began in 1855?—Rather earlier; I think 1852.

564. The payments were largely increased in 1855, were not they?—Yes.

565. And upon those payments you have been able to increase your debt?—Yes.

566. And to get money for navigation purposes?—Yes.

567. Besides that you got, I think, 50,000*l.* odd from the New River Company, as a capital sum, at one time?—Yes.

568. That has also gone into the navigation?—Yes.

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569. Did you ever get any capital sum from the East London ?—I think not.

570. This has been done by the New River Company ; they have done drainage works at Hertford ?—Yes.

571. And the trustees benefit thereby, do not they ?—I really cannot see how, at present.

572. Carry your mind back to the dredging question again ?—We have to dredge at Ware ; it is removing it from Hertford to Ware.

573. That is something, at any rate ?—Yes.

574. Though you say that it comes in again at Ware, let me get from you what it is that comes in again at Ware ?—It is the discharge from the sewage works at Hertford, after the sewage has been subjected to the process of liming.

575. After having the solid stuff taken out of it ?—Yes.

Mr. *Pember.*] The sewage works at Hertford are not conducted by the New River Company.

Mr. *Denison.*] You will find that they are, if you inquire.

Chairman.] We have that before us.

576. Mr. *Denison.*] I thought everybody knew it; my learned friend Mr. Pember does not. We have it, that the New River Company have already expended whatever it has cost in doing sewage works at Hertford, the effect of which is to deliver water to you free from solid matter, and to a considerable extent purified ?—I should hardly admit that it is free from solid matter, because a deposit is created in the Lee below Ware, in consequence of that effluent water being discharged ; there is a deposit arising from something.

577. That is to say, that it is not properly done ?—Yes.

578. Where do the Commission sit ?—They sit during the summer months, or during a portion of the year, at Hertford, and during the Session of Parliament in London.

579. The income of the Trust, I see from these figures, has been a tolerably steady increase ?—Yes.

Chairman.] We have all that in the Return.

Cross-examined by Mr. *Bidder.*

580. In your opinion, is not it very essential that the navigation interests should be adequately represented ?—Yes.

581. And if these conservancy powers were given over to the new Board without an adequate representation of navigation interests, the interests of the navigation might be seriously impaired ?—That is so.

582. The Trustees of the River Lee Navigation have no beneficial interest in the tolls ?—No ; except indirectly.

583. As owners of property ?—Yes.

584. If there is any surplus they have no interest, and if there is any deficiency they are not personally liable ?—No ; they have nothing to do with the funds.

Cross-examined by Mr. *Sargood.*

585. Do you know, of your own knowledge, how many trustees there are ?—Sixty-five at this moment.

586. Are they all still qualified, or have any of them ceased to be qualified by not sitting for six months ?—I believe they are all qualified.

587. What is your average attendance ?—Six or seven ; the attendance varies from seventeen to three.

588. Your whole 65 can hardly all remain qualified, can they ?—Out of the 65 there are certainly 40 odd who are not subject to that clause you mentioned ; that only makes 20 subject to the clause you mentioned.

589. Have all the 20 been attending within the last six months ?—I think so.

590. Hitherto

590. Hitherto the duties of the trustees have been confined to the navigation from Hertford downwards?—Yes.

591. If this Bill should pass, it is proposed to add the conservancy of the river as to purification as well as navigation?—Yes.

592. If the whole limit is exactly that proposed by this bill, you will go from Hertford upwards to the source of the river?—Yes.

593. For that part of the river it would be purification, without navigation?—True; you might take it so from Hertford to Luton.

594. As to this constitution, you and the Board of Trade seem to have settled it amicably?—We look after our own interests.

595. I will assume that you are not amicable, if you like?—We are perfectly amicable.

596. You are to give one representative to the New River, and one to the East London?—Yes.

597. On what ground are they to have representation?—The New River has representation now.

598. On what ground are they they to be represented?—On the ground that they are already represented in the Lee Trust, and therefore their interest should be preserved.

599. Merely because they have it?—Yes.

600. Probably you do not think that they have a right to it?—Yes, I do.

601. Upon what ground?—The New River Company have a large interest in the navigation; some portion of the bed of the river belongs to them.

602. Are they more interested in the navigation or in the purification of the water?—They are interested as landowners, as owners of the bed of the river in some portion of it, and as taking water from the navigation.

603. Then they have a double interest, both purification and navigation?—Yes.

604. Has the other company also a double interest?—No; I am not sure that they own any portion of the bed of the river.

605. They are interested in the purification?—Yes.

606. What are the Metropolitan Board of Works to have representation for?—As to that I should look to the report of the Commissioners, it is only because they are in the report of the Commissioners that they are brought in. I have seen it in the report.

Chairman.] It is in the Committee's report of last year.

607. Mr. *Sargood.*] I suppose it is because they represent the consumers, or are supposed to do so?—This is what the Committee say, "Under the provisions of this Act, large payments have been made and are annually contributed by the two companies, which ultimately fall on the inhabitants who pay water rates, and who, as the consumers of the water, have the greatest interest in its purity; your Committee are of opinion that, for the purpose of protecting the interest of the inhabitants in any Board of Conservancy which may be constructed, they should be represented on the Board, by the nomination of members by the Metropolitan Board of Works.

608. We will assume that it is their interest in the purification of the water, that gives them some title to representation?—That is the view of the Committee.

609. As from Hertford up to Luton has no interest except in the purification, what amount of representation have you and the Board of Trade agreed to give to that part of the river?—We and the Board of Trade have only agreed, as far as the navigation is concerned, that we should have seven members to look after navigation interests.

610. I am looking after the purification, you have not thought of that?—No; we do not consider it our duty.

611. After this Bill became law, what possible interest and duties would the existing trustees of the River Lee have?—I take it that the trustees of the River Lee are trustees for the debenture holders.

612. I am not going to take it so?—In my opinion they are bound to protect the interests of the debenture holders as well as the navigation.

613. The Bill as originally prepared by the Board of Trade, in your judgment, does

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does not protect the creditors of the Lee Trust; is that what you mean?—I think that seven trustees would have that effect.

614. The trustees can only administer the law. I am to take it from you that the Bill does not protect the creditors?—Not without a proper representation of the trustees. The water companies are trading for their own pecuniary advantage; but the trustees of the Lee are a public commission, and they are, one would think, better qualified to look after the interests of the debenture holders than the water companies.

615. I want to understand this from you—if the Bill protects the interests of the debenture holders, and the new constitution administers the law, do you mean to tell me that the debenture holders require any representation on the part of the present trust?—I think they do.

616. Is it for that purpose that you are to have seven of the old trust as representing the debenture holders?—As partly representing the debenture holders and as partly representing the navigation interests.

617. Partly representing the debenture holders?—Yes.

618. Will you tell me the navigation interests which they represent directly?—The maintenance of the navigation of the whole of the river is vested in the trustees of the River Lee.

619. If that duty is vested in the other body to be constituted, what interest as regards navigation would remain in the existing trust?—That other body would not have a pecuniary interest in the matter.

620. What pecuniary interest have the existing trust in the subject, if this Bill becomes law?—They would have a duty cast on them by Parliament.

621. Supposing they are relieved of it, what pecuniary interest have they in the subject that requires protection?—The trustees conceive that their constitution would better conserve the interests of the debenture holders, and, therefore, they press for the seven representatives.

622. They think that they would be better managers than the new body?—Yes.

623. We understand from Mr. Pember that the trustees have no objection to the purification of the river so long as they are not called upon to pay anything towards it. If they have no interest in the purification, they have no interest in the navigation, as navigators, have they?—Not as navigators.

624. They merely consider that they are an intelligent and respectable body, capable of doing the work, and they wish to remain in office?—You may take it so.

Cross-examined by Mr. *Round*.

625. Had you any share in the preparation of this Bill?—Not any, except so far as the navigation was concerned.

626. First, let me read to you a passage in the Report of the Rivers Commission upon the River Lee. At page 23 I find this: "The interests which demand representation in any body having the government of the River Lee are the navigation, the riparian owners, the towns on the banks of the different streams; the traders and wharfingers using the river; both the great water companies; the water consumers; the proprietors of the Stort navigation; and lastly, the central government, whose presence at a Conservancy Board is essential to a due regard being paid to the various interests, and especially to the public health. Some of these interests are no doubt sufficiently provided for by the present trust; but there are others which have no direct means of making their wishes known." Has any representation been made to you that this recommendation or this statement in the report should be carried out practically in the Bill, on the part of the town on the banks of the river?—My attention has not been drawn to that particularly, but we think that the trustees being chosen from the counties through which the river runs, the towns have a representation in that way.

627. They are self elected?—No; the members for the county, and the members for the borough are *ex officio* members.

628. There is no provision in the Bill for the towns, is there?—No.

629. The River Lee Trust is in the position of vendors of water, is not it?—Yes.

630. The

630. The water companies are in the position of purchasers?—Yes.

631. The object of this Bill is that the vendors shall be able to supply to the purchasers a better article?—Yes; the companies are already the owners of the surplus water of the Lee.

632. At whose expense is the article to be made better?—We say not at the trustees' expense.

633. Suppose I say it is right that it should be done at the expense of the towns; what should you say to that?—I should take your view.

Cross-examined by Mr. *Michael.*

634. Are you really here as promoters or opponents of the Bill?—We are not here as promoters, because we are opponents.

635. You really strive to throw out this Bill?—No; we strive to preserve the interests of the navigation, and of the bondholders; if we can do that, we have no strong objection to the Bill, because we go with the River Pollution Commission, that something must be done in order to purify the river.

636. Do you strive here as *bonâ fide* opponents, or *quasi* promoters?—We strive here to preserve our own interests, I can say no more; if we found that those interests were being invaded, we should oppose the Bill very strongly.

637. Is the personal interest of being represented as trustees of the River Lee what you are here to conserve?—Yes; so far as that personal interest bears upon the navigation.

638. You do not oppose the Bill because the navigation is threatened by the Bill?—I call it conserving the interests of the navigation; we oppose on that ground; if the navigation is touched, we say we must have its interests properly protected.

639. You say that if the Bill passes, the navigation will be, in your opinion, injured?—That would be the effect in an indirect way; the abstraction of water is one point.

640. Do you adhere to the answer you gave, that if this Bill passes, the navigation of the River Lee will be injured?—Did I say so? I think it is the other way.

641. Put it in your own way?—I say that the navigation will derive no great benefit from this Bill.

642. Will it be benefited or will it be injured?—I do not think that it will be benefited. I certainly think that the exclusion of the sewage from the navigation will have the effect of diminishing the volume of water going to the navigation.

643. You would allow, under certain circumstances, the effluent water to come in?—If in such a state as not to deposit any matter to any great extent.

644. I ask you whether you are here as promoters or opponents of the Bill?—We appear as opponents.

645. Do you wish this Bill to become law or to be thrown out?—We do not object to the principle of the Bill, we only wish to protect our interests; we object to being saddled with the expense of working this Bill.

646. Where is the saddling of the expenses on you?—There is none at present.

647. What do you object to in the Bill?—As the Bill now stands it is not objectionable.

648. Then you are not opponents of the Bill?

Chairman.] His position, technically of course, is that which is set forth by his petition,

649. Mr. *Michael.*] In your opinion, should all persons really interested in the preservation and the purification of the River Lee be represented on any conservancy board that is to protect the river in those two points?—I think that it would be desirable.

650. Do you think that by the constitution provided these interests are represented?—I should have thought they were, but my attention has not been particularly drawn to that subject; my attention has only been drawn to the navigation and the bondholders' question.

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651. We look to you as the representative of the Trust to tell us whether, from your experience, you think the interests of the towns upon the banks of the river are in any way represented in the constitution here?—Not directly.

652. How indirectly are they represented?—In the way I mentioned. I suppose that the Members of Parliament and the persons who are elected from time to time on the Lee Trust would have at heart the interests of the towns.

653. I understood you to say that the Members of Parliament do not attend the Board?—In Hertfordshire they do.

654. Take my own case of Tottenham; how is Tottenham represented in that constitution?—The Deputy-Chairman of the Trust at this moment is the Chairman of the Enfield Board of Health; he has the interest of that neighbourhood at heart.

655. *Chairman.*] Is any landed proprietor within the Tottenham district one of the electors under the present system?—I think not.

656. Mr. *Michael.*] Do you depend upon Enfield being represented for the representation of Tottenham?—No; the interest of those towns has not been a subject of our consideration.

657. Are they not very largely interested in this question?—Very largely.

658. When you proposed in your Bill to become a sewer authority and to levy sewer rates for the diversion of sewage, upon whom were those rates to be levied?—There was a suggestion that the work should be carried out by the conservancy in that case; then if the conservancy carried out those works it was proposed that the district should be rated, inasmuch as it would be benefited by the works.

659. The object of your Bill was, not only to preserve the navigation, but to conserve the purification also?—Yes.

660. In conserving the purification and making your diversions of the sewage, benefit would accrue to the water companies?—Yes; but also to the parties included in the districts.

661. Would the water companies derive immediate benefit in the necessity being taken away from them of constructing works themselves for the diversion of the sewage?—Yes.

662. Did you propose, in your Bill, to levy any rates on the water companies for the benefit so conferred upon them?—I think there was a clause in the notice to levy improvement rates on owners and occupiers, and on water companies, and bodies taking or using the water of the Lee or the Stort.

663. That does not exactly answer my question; if you diverted the sewage, in order to benefit the water companies, were any rates to be levied, or any sum contributed by the water companies for the benefits conferred upon them?—Yes; I think so, certainly; I had better read the whole of the clause of the notice. "To enable the said trustees to levy rates or charges upon the several owners and occupiers of property within the parishes near to or abutting upon the said rivers Lee and Stort respectively, and the tributaries thereof, for the preservation of the banks and the improvements of the same, and for other the objects and purposes of the said intended Act, and for reimbursing to the said trustees the cost of making, executing, and maintaining any works to be authorised by the said Act, and also to levy annual or other rates, or fixed, or other charges upon all water companies and other bodies and persons taking or using the waters of the rivers Lee and Stort respectively, or any of the tributaries thereof respectively, and to alter, vary, or extinguish, control or regulate the powers, rights, and authorities of the New River Company and East London Waterworks Company, and all other companies and persons now taking or using the waters of the said rivers, or their tributaries, or entitled, or claiming to be entitled to take or use such waters."

664. In all the proceedings you have taken under your former powers as trustees, have they been simply directed to the improvement of the navigation, and not to the conservation of the purification of the river?—Yes; the conservation of the purification of the river has, to some extent, been looked after by the trustees. In your case of Tottenham, for instance, the nuisance you poured in was so intolerable that we were obliged to apply for an injunction against you, and last Thursday we got an injunction to restrain you from continuing the nuisance. The immediate interest we had in that was to prevent deposit in

in the navigation which would cause an obstruction and create expense in dredging.

665. Have you directed any of your energies against any other persons injuring the navigation?—Yes; the Metropolitan Board of Works. There we obtained an injunction, and 800 *l.* for removing a deposit they had made.

666. What part of the River Lee was that?—At Old Ford.

667. Are there no other bodies under your jurisdiction that throw large quantities of sewage matter into the Lee?—Yes.

668. Have you done anything to purify the river as against those parties?—We are coming to those parties by degrees.

669. Did not a large quantity of the matter in respect of which you proceeded against Tottenham accrue through the Catchwater Dyke?—The Catchwater Dyke certainly discharges impurity.

670. Was not there a large quantity run down through that dyke into the river?—Yes; I think there has been from time to time.

671. Was not that a considerable cause of the impurity against which you proceeded in the case of Tottenham?—I think none whatever.

Cross-examined by Mr. *Littler*.

672. Judging from the Preamble of this Act of George the 2nd, "for preserving and improving the river from the town of Ware to the new cut or river made by the mayor, commonalty, and citizens of London, and for enabling the Governor and Company of the New River the better to supply the cities of London and Westminster and the liberties and suburbs thereof with good and wholesome water," the object seems to have been to give a representation to London and Westminster in respect of the purification of the water which would be used by the citizens of those two cities?—Yes; but the Act of George 3 gives you a tremendous addition.

673. Under the Bill the mayor and aldermen are to be represented by a separate member?—Yes.

674. Can you see any reason why they should continue as an elective body to elect others?—The Mayor and Aldermen of London derived their interest under the old Act.

675. Can you see any reason why, when they have a representation of their own, they should be part of the electors who represent another and a different interest?—I see no special reason.

675*. Do the Members for Middlesex ever come to the meetings?—I think not; I have not known them to come.

676. Have you seen either of the Members for Westminster there at any time?—I think not.

677. Westminster has no interest in the Lee, except so far as it is supplied with water from that river?—No.

678. Is there any reason why, when the New River is of itself represented, and when the Board of Works are to come to represent the public of Westminster, the Members should still continue to elect?—No; I have none to urge, only that they are interested in the old Acts.

679. Have the Members for Essex ever been there?—I think not.

680. The Members for Colchester, have you ever seen them?—No; my office only dates three years back.

681. Your father was clerk before you?—Yes.

682. Do you ever remember any of those gentlemen I have named being there?—No; I was not in the habit of attending the meetings previous to my appointment.

683. The New River Company's members have never attended except when their interests were in danger of being affected?—I have never seen them.

684. Do you see any reason why they should continue to be electors of the new body when they are already represented?—No.

685. With regard to the elected trustees, Mr. Bosanquet is a landowner and not a trader?—A landowner and millowner.

686. He is not a trader?—No; of course the produce to and from his mill goes by the river.

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687. And the Mr. Bakers (father and son) are land-owners?—Yes.

688. Mr. Blake, he is a land-owner, and not a trader?—Yes.

689. And Mr. Bentley the same?—Yes.

690. In fact, the only trader is Mr. Page, who is a maltster?—Yes.

691. With respect to those gentlemen who are named in the original Act, the Act of George III., are you aware that all those who are called "gentlemen" are traders?—I cannot tell you that.

Mr. *Pember.*] Is my learned friend going to offer the slightest proof that that is the fact?

692. Mr. *Littler.*] Yes, I am. (To the *Witness*). Is not it the fact that for many years out of those gentlemen there has been only one trader?—No; Mr. Gripper, who was a large trader, was one.

693. Did he ever act?—Yes.

694. How long is it since there has been a fresh appointment of a trader?—Mr. Page's was the last; I think it is two years since he was appointed.

695. Had there been for a long time before that any new appointment of any trader?—No.

696. Of those gentlemen who are land-owners, 18 out of the 20 represent Hertford, do they not?—Yes.

697. Mr. Meyer lives in Middlesex?—Yes.

698. And Colonel Palmer in Essex?—Yes.

699. Is not it the fact that all the rest live in Hertfordshire?—Yes, I think so.

700. Under this new constitution the number of elected trustees to continue for the mere purpose of electing members of this Board is to be twenty only?—Yes. That is to say, the electoral body to represent the whole interests of the navigation of the Lee is to be twenty only in future.

Chairman.] No, we are not taking that as settled.

Sir *George Bowyer.*] We have reserved that question of the number.

Chairman.] Where does that appear?

701. Mr. *Littler.*] In Section 14 of the Bill: "From and after the passing of this Act, notwithstanding anything in the former Act, the number of persons being trustees otherwise than by virtue of office, shall not at any time exceed twenty." (*To the Witness*). You say that, everything which can be done to strengthen the hands of the navigation is now absolutely required?—Yes, that is what we strive for.

702. Anything which would carry that out would be acceptable to trustees, whether it destroyed them by that name or not?—Yes.

703. The traders on the Lee have sometimes been dissatisfied with the way in which the navigation affairs have been administered, have they not?—That I do not know.

704. Do not you know that there is an association of Lee traders?—I thought that was formed for a particular purpose.

705. For the particular purpose of taking care of the interests of the trade and watching the trustees?—I have not the least idea that it is for that purpose.

706. Do not you know that the body I represent here was formed expressly for the purpose of watching your doings?—I thought it was formed with reference to the entrance.

707. That was the immediate cause of its origin; but is not it kept in existence at the present moment, and subscribed to, by almost every barge-owner, for the purpose of watching you?—I do not know; it may be so.

708. *Chairman.*] We may take it for granted, Mr. Littler, that you represent all the interests defined in the Bill as the electoral body for the representative of the barge-owners.

Mr. *Littler.*] That is so.

Mr. *Wilson.*] I represent some others.

Chairman.] We are now speaking of the electoral body.

Mr. *Wilson.*] I represent Mr. Meeson and others.

Chairman.] That is a separate question; we are speaking now of the representation of the barge-owners.

709. Mr. *Littler.*] You would agree that anything that would obtain as large a representation of all the interests of the navigation, that is, both traders and riparian proprietors, as possible, would be a very desirable thing in this Board?—I should strengthen the navigation interests as much as I could on the Board, certainly; we consider ourselves trustees for the traders, it is for their benefit we are working.

710. Do you know of any instance in which a body of this kind has been retained solely and merely for the purpose of electing?—I do not know of any instance of the kind; I think the old Thames Commissioners are kept up.

711. You are thinking of the old electors; you say that this navigation has been very considerably improved, and that large works have been constructed; is it in your knowledge that that was by reason of the river having got into a very much worse state than it formerly was?—Yes.

712. Forty or 50 years ago, vessels of 70 tons could go up as high as Ware?—No, that is contrary to all the information that I have received; it is now an 80-tons navigation to Hertford.

713. There is nothing like a published audit, is there, of your Board; I see in the report, you say that there is an audit by the chairman, but there is no published audit that goes through the district?—No; that is to say parties interested may and do apply for it.

714. They have to pay for it?—Yes, there is a sum fixed by the Act, 2 *s.* 6 *d.*

715. The audit is by a member of the board, and not by an independent body?—The deputy-chairman is the auditor.

On Mr. *Wilson* proceeding to cross-examine the Witness, on the Petition of John Meeson and others—

Chairman.] If you have anything to say with regard to tolls, it will be convenient for you to address yourself to that afterwards; as to the election of trustees, as you have nothing about it in your petition, you are quite out of order in cross-examining the witness on the constitution.

Cross-examined by Mr. *Longmore* (for the Corporation of Hertford).

716. Has not the Mayor of Hertford attended the meetings of the trustees?—Yes.

717. Frequently?—Yes.

718. Does not the navigation of the Lee end at Hertford?—Yes, the navigation part.

719. Is not Hertford a town very much interested in the navigation of the Lee?—Very largely.

720. Is not there a large quantity of corn and coal brought from London to Hertford by the River Lee?—Yes.

721. How do you show that by the nomination of the several trustees whom you propose, the town of Hertford is in any way represented on the Board?—The Member for Hertford remains as an elector.

722. Not as Member for Hertford; is he nominated as Member for Hertford?—No, not in the Bill.

723. I understand you to say that you propose to put Mr. Dimsdale, the Member for Hertford, as one of the seven trustees; is that so?—No; the names are deferred entirely to the passing of the Bill.

Mr. *Pember.*] The River Lee Trust is retained as the elective body, and the only qualification upon that retention is this: in Clause 14 of the Bill it says, "From and after the passing of the Act, notwithstanding anything in any former Act, the number of persons being trustees otherwise than by virtue of office, or the number of unofficial trustees shall not exceed 20," but the official trustees remain.

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724. Mr. *Longmore.*] Would all the official Trustees who are to remain, remain Trustees still?—Yes, as electors

725. But they would not be Members of the Conservancy Board?—Not necessarily.

726. How do you show that the town of Hertford is represented on that Board? —

Chairman.] We have all the facts; the Members for Hertford and the Mayor of Hertford are electors.

Mr. *Longmore.*] That is not the point I am on; I want the witness to explain how the town of Hertford would be represented on the Conservancy Board.

Chairman.] We have the facts before us; those are three parties who will have the right of participating in the election of the elected Members of the Board.

Mr. *Longmore.*] You will bear in mind that there is a petition from the Corporation of Hertford that the Mayor for the time being should be one of the seven Trustees appointed by the Act.

Chairman.] I mean that we have the facts, and you need not give any evidence upon that, because it is all before us.

Re-examined by Mr. *Pember.*

727. With regard to your connection with this Bill, you had a Bill of your own?—A notice.

728. The Committee that sat upon the East London Bill last year recommended that a Bill affecting the River Lee Trust should be brought forward by the Board of Trade?—Yes.

729. You giving way to that recommendation gave up your own Bill?—Yes.

730. And you did the best you could to see that the old River Lee Trustees were properly represented in the Bill as brought forward by the Board of Trade?—Yes.

731. To that you limited your endeavours?—Yes.

732. With regard to the traders, whom my learned friend, Mr. Littler, represents, did the body to which he referred or any of the traders ever make a representation of grievance to your Board on the state of the navigation?—No.

733. Have you had many such complaints made to you about the state of the navigation?—No.

Mr. *Littler.*] I shall prove that there have been a great many complaints.

734. Mr. *Pember.*] Have you any knowledge who Mr. Marchant is?——

Mr. *Littler.*] Perfectly. He has been clerk to the Trust for the last three years.

735. Mr. *Pember.*] During the three years during which you have been clerk to the Trust, have there been many, or any, complaints of the state of the navigation?—At this moment not one occurs to me.

736. Your father was clerk to the Trust before you?—Yes, for 40 years.

737. Were you in your father's office?—No.

738. You had a tolerable knowledge of what was passing with regard to the Trust?—Of late. The gentlemen say that there have been complaints for 20 years; my knowledge does not carry me back to that time.

739. It is within your knowledge that many of the trustees are large debenture holders?—Yes.

740. Is it the fact that the late Lord Salisbury held nearly 40,000 *l.*?—Yes.

741. Can you call to mind at this moment any trader who is a debenture holder?—No; but I would rather like to look through the list; there are upwards of 100 holders; I cannot say there are not.

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742. As to the state of your funds, though your receipts have been increasing during the last 10 years, I believe you have scarcely any available surplus, if any, at this moment?—No.

743. That expenditure has been caused by the works for improving and maintaining the navigation?—Yes.

744. The trustees consider themselves, do they not, as representing the debenture holder, quite as much as the navigation itself?—Yes.

745. The security of the debenture holders is valuable according to the state in which the navigation is maintained?—Yes.

746. Mr. Denison put that question of dredging to you, and he asked you whether it would not save a good deal of dredging if the provisions of this new Act were carried out. Dredging, I suppose, is a tolerably important element in your expense?—It is a considerable element.

747. But only one element out of many?—Yes.

748. The amount of dredging saved to you would be only a proportion of the present amount of dredging?—Yes.

749. And not a very large one?—No.

750. The sewage works at Hertford, which are carried out by the New River, are carried out perfectly independent of this Act, and are now works in complete operation?—Yes.

751. They will not be increased under this Act at all?—I believe not.

[The Witness withdrew.

[Adjourned to Wednesday next, at Twelve o'clock.

REFORM CLUB PALL MALL

Wednesday, 29th April 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Powell.
Mr. Benyon.	Mr. Sheridan.
Sir George Bowyer.	Mr. Surtees.
Lord John Hay.	Mr. Wise.

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

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THE Petition of the Marquess of Salisbury was read. No Counsel appeared in support of this petition.

Mr. *Coates* appeared as Agent.

Mr. *Bidder* stated that his clients, the Stort Navigation, had arranged some clauses for the promoters which he hoped would meet their views.

Mr. *Pember* was heard to address the Committee on behalf of the bondholders, and with respect to the constitution of the Board.

Mr. *Littler* was heard to address the Committee, and submitted a proposition with respect to the representation of the riparian proprietors upon the Board.

Mr. *Alfred Manser*, called in; and Examined by Mr. *Littler*.

Mr. *A. Manser.*

752. YOU reside at Hoddesdon, which is on the Lynch, which runs into the Lee?—Yes.

753. Are you a miller, and barge-owner, and coal merchant, and have you two mills, one on the Lynch and one on the Lee?—Yes, I have.

754. You have, and your father before you, taken very great interest, have you not, in the maintenance of the Lee navigation?—Yes, we have.

755. I believe that you yourself have from childhood watched your interests on the Lee?—Yes, I have.

756. You are yourself largely interested in the maintenance of the navigation, are you not?—Yes.

757. Can you tell us up to the present time what is your view, without going into details; I think that you have yourself been since 1864 secretary of the barge-owners' association?—Yes; honorary secretary.

758. That association was formed for the purpose of protecting the interests of traders on the navigation?—Yes, it was; we were not satisfied with the acts of the trustees.

759. Will you tell me this; does that association represent a large proportion of the traders?—Yes, it does.

760. Am I right in saying very nearly all?—The greater part of them.

761. That association, would you say, was formed in consequence of your not being satisfied with the administration of the trust?—Yes.

762. Mr. Marchant said on Monday that he never heard of any complaints against the trustees; I believe you could inform me of some, if it were necessary to go into that point?—Yes.

763. Mr. *Rodwell.*] In writing or otherwise?—Both.

764. Mr. *Littler.*] You have considered it desirable for some time, have you not, to improve the constitution of the trustees?—Yes.

765. At

765. At the present moment, do you think that the owners of that property or the traders and barge-owners are at all properly represented upon that trust?—No, they are not properly represented.

766. Among other things, in your judgment has the rate of expenditure, and the application of the expenditure, been excessive of late years as compared with what it would have been if the interests of the traders had been properly considered?—Yes, it has.

767. Have you considered what would be a desirable thing for the constitution of the Board, so far as representing navigation is concerned. Have you taken into your consideration what would be a desirable thing for the country through which the River Lee passes?—I consider the proposition which you have just made the proper one.

768. As far as you have been able to learn, from your neighbours and so on, is that a representation which would meet with general approval in the county?—Yes, very general approval.

769. Are you of opinion that such general representation would properly protect the interests of those concerned in the river?—Quite so, I think.

770. I believe that you and many others belonging to your association attach great importance to the election being personal and not by proxy, do you not?—Very great; it is a matter of vital importance.

771. We have already had some account of the Lee Valley, but I believe in addition to the towns there are a considerable number of manufactories spread along the banks of the Lee, and which depend upon water carriage for their very existence?—They do.

772. And do you think that it is desirable that such persons as that, although not living exactly upon the banks, should be represented?—Yes.

773. And the limit that has been proposed is three miles from the river?—Yes.

774. In your judgment, would that be sufficiently far to represent all interests using the river?—Yes, I think it would.

775. I believe some years ago there were some traders upon the trust, were there not?—Yes, there were.

776. Have you any idea about how many there were 15 or 20 years ago?—I could not say how many, but I know a great many personally.

777. As those persons have ceased to be trustees, I think no new persons have been elected?—I think only one.

778. Could you tell me how long it was since that person came in?—About 17 years, I think.

779. There used to be a committee, called the Improvement Committee, consisting principally of traders, was there not?—Yes; I think most of the members upon it were traders.

780. That committee was abolished about six years ago, was it not?—Yes, it was.

781. Since that time the expenditure has been very much increasing, and the interest increasing?—Yes.

782. With reference to the improvment made in the navigation in that time, does it bear in your judgment any proportion to the increased expenditure?—I do not think it does.

783. What was the condition of the river about 20 years ago—about the draught of water first—20 years ago, and then as far back as you can remember?—I asked an old trader upon the Lee whether it was the fact that the water was diminishing, and he said that 20 years ago he took up 70 tons, and 30 years ago he took up 50 tons.

784. *Chairman.*] How many barge-owners are there navigating the River Lee?—I am afraid I could hardly answer that.

Mr. *Littler.*] There are somewhere about 300 barges of 20 tons each.

785. *Chairman.*] What holding of barges would you consider sufficient to constitute a barge-owner under your scheme?—I think the owner and the user of one barge of 20 tons should be entitled to a vote.

786. You think it ought only to be that?—I think a man owning one barge should

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should have a vote, and if he has four barges it might be still one vote; and so on in proportion, whatever you might think fit.

787. You would have a scheme by which the number of votes was to be increased according to some scale of increased ownership of barges?—Yes; there is a scale in the Bill. I think if a man had two votes it would be quite sufficient.

Mr. *Littler.*] It was thought that the dual voting was not particularly popular, and that would probably be struck out.

788. Mr. *Surtees.*] What would be the value of an ordinary barge?—Three hundred and fifty pounds, without the sail.

789. And what would be the value of a small barge?—I could not tell you that; a 70 ton barge would be about 380*l.* or 400*l.*

790. Are they ever let for the year; what would be the charge for hiring a barge?—I generally use my own, so that I do not hire a barge.

791. Sir *George Bowyer.*] Do you not think that there would be some danger if you gave a vote to the owner of every single barge; that there would be some faggot votes made by making over the barges each to different people, upon a certain understanding?—I think, if the owner was registered, it would do away with the danger.

792. The man who was the owner of 20 barges might, if he liked, have 20 votes, by making over the barges to different people, under a secret understanding; how would you prevent that?—If he is a *bonâ fide* trader upon the register, I see no objection to his having a vote.

793. Then he would be able to swamp the rest by making these votes to that extent, and thereby get an undue preponderance.

Mr. *Littler.*] That would be probably a thing which would come under the view of the revising barrister, and any proviso which would prevent anything of that kind we would gladly put in the Bill.

794. Sir *George Bowyer.*] One way of obviating that difficulty would be, not to give a vote to every single owner of a barge, but to give a vote only to those who owned a certain number of barges—that would make it more difficult to make fictitious votes?—You would exclude several persons who had one barge, and who were *bonâ fide* traders on the river.

Mr. *Rodwell.*] I was going to state, in justice to the Committee, that on the part of the trustees who have hitherto, up to this moment, been, to a certain extent, assenting parties to the Bill, what I wish to guard myself against is this (I am now taking a part in the discussion by cross-examining Mr. Manser), that in the event of the constitution being altered, we should feel at liberty to give our most decided opposition to the Bill instead of giving our assent to it. I say this without the slightest disrespect to the Committee, that the trustees who are around me have heard this with some surprise.

Chairman.] You need not go very far into that—you need not think that the Committee would give votes to 300 owners of barges.

Cross-examined by Mr. *Rodwell.*

795. How many barges have you?—I have two.

796. How long have you had them?—Fifteen years.

797. I will not take you in detail through the examination. You were examined before the Commissioners, were you not?—Yes.

798. And did you not then give your approval of the mode in which the trustees have carried on their business, and the satisfaction which they had given to the public?—There is one word left out in that evidence—the word "generally."

799. *Chairman.*] You need not pursue the question any further. If there were complaints

complaints they must have been in writing, and they ought to be produced, as you have denied the complaints.

Mr. *Rodwell.*] Mr. Manser was a witness examined in 1866, and the effect of his evidence was this: Question 4879 is, "Therefore so far as the substantial interests of the public are concerned, the present Trust appears to be working well?—Yes, so far as the public is concerned." Question 4877 is, "The trustees had power to deal with it in their own way, and you think that they did not consult your interests?—Yes, but I do not make a charge against them, that is not my object."

Witness.] I did not go there with that object that day.

800. But I suppose if you had had anything to say, you would have said it?—I think you must go through it all, if you want to find it out.

801. What are the complaints that you made?—This is one: at a meeting of the traders held on February the 2nd, 1864——

802. I will come to that presently; I want to know whether in your individual capacity as Manser, or in your partnership capacity as Manser and Co., you made any complaints as to the management of the trustees, or of any case in which your interests have been compromised?—Yes; in that evidence I stated that I made an application with regard to a weir, and that I had not met with attention.

803. How many years ago is that?—Some considerable number of years ago, some 15 or 20; that point you know.

804. That was a strictly legal question, was not it?—No, I do not think it was.

805. Were you not informed that it was a question which involved the construction of an Act of Parliament, and a conflict with the New River or the Water Company?—There were two cases, one the case of the weir, and the other the case of an iron watermark.

806. Exactly; and there would have been a considerable difficulty if the weir had been altered or the mark removed, would there not?—I know that ultimately they gave way upon the point.

807. But they were obliged to consider the question first in its legal bearings?—They tried to curtail my rights, and then they had to give them to me.

808. And you then got what you wanted?—After a great deal of trouble.

809. Do you not know that your application involved a legal question between them and the water companies, with reference to the supply of water that they were entitled to?—No, I do not think it did.

810. Do you, or not, know that they told you, "We must consider how we do this, because it will involve litigation"?—I do not remember that.

811. Do you not remember that they had considerable litigation with the New River Company in a case which was tried at Maidstone some years ago?—I do not recollect that.

812. Your father was one of the trustees then?—My father was a trustee.

813. What I want is some tangible, substantial complaint to put before the Committee, to show that the trustees have neglected their duty; and, therefore, I challenge you to produce it yourself?—I made those two complaints; the one of the weir, and the other of the post.

814. These were years ago. Now, can you tell us, with reference to your trade, with regard to tolls, with regard to navigation, or any matter kindred to that, whether you have ever made a complaint?—I have applied to the trustees to reduce the tolls.

815. When?—I think about three years ago.

816. Did they reduce them?—No.

817. Have they been reduced of late?—On one article they have; on the article of flour they have reduced them; but, at the same time, upon the wheat, they used to charge by the quarter, but now they charge by the ton; so that the tolls are not reduced in the proportion that they may appear to be.

818. I suppose that was a question that might be fairly left to the trustees to consider?—We do not think that they have sufficiently considered our interest.

819. That is the complaint you refer to?—That is one of them.

820. Now, will you give us another?—I want to come on to this question—

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the question of the Lee traders. In 1854, in consequence of the Lee Trustees entering into an arrangement with the Regent's Canal, whereby they parted with a large portion of the river, the Limehouse Cut, under an Act of Parliament, at the expiration of ten years, that would be 1866, to legalise that arrangement, the traders upon the rivers Lee and Stort met together, and we found that it was quite necessary that we should have to bind ourselves together into an association, and we did so. The first meeting was held about February.

821. *Chairman.*] Will you merely state the simple fact, what was the complaint made to the trustees?—The complaint was just this, that they spend our money and sell our property in a way of which we do not approve. I mean this: A deputation went before the trustees, and we then asked them whether the trustees held themselves free to uphold the rights of the traders irrespective of the agreement of 1854. The trustees declined to answer the question, and therefore our association was formed. We found that we could not let the matter rest, and we went to them and said, Will you uphold our rights irrespective of any mistake you have made? and the answer we had was, We decline to answer the question.

822. Mr. *Rodwell.*] What rights do you talk of? what rights had you in your mind?—That they should manage the trust in a reasonably good way, and in such a way that the income may increase, that economy shall be used, and that they shall reduce the tolls in proportion to the increase of the income.

823. Will you be good enough to tell me within the last 10 years how much the tolls could have been reduced?—I cannot tell that.

824. Will you tell me how much the traffic has increased within the last 12 years?—I think the increase is about 3,000 *l.* a year from the tolls, and the increase upon the debt is something like 5,000 *l.* or 6,000 *l.* a year; so that they spend something like 5,000 *l.* or 6,000 *l.* a year. to obtain 3,000 *l.*

825. You know as a fact that the tolls have been reduced some 50 per cent.?

Chairman.] We have all these facts before the Committee, and we need not go through them again.

Mr. *Rodwell.*] But we have a gentleman coming here and saying that it is not so when it is so.

Mr. *Littler.*] The figures show that it is so.

826. Mr. *Rodwell.*] Have you told the Committee everything that you know of now that you have to complain of?—There have been many more acts of the association.

827. I do not care about the association?—I have not the books. This will show the applications to the trust from time to time. We go as an association now, not individually.

Mr. *Rodwell.*] Perhaps my learned friend will put the book in?

Mr. *Littler.*] Yes, certainly—(*the same was handed to the learned Counsel*).

Witness.] It is a private book belonging to our association—(*The book was then returned to the Witness.*)

Cross-examined by Mr. *Nicholson.*

828. Will you be good enough to state what you mean by riparian owners of property; do you mean freeholders or leaseholders?—Yes, and tenants from year to year, to a certain amount.

829. You said just now that the trustees had spent 6,000 *l.* a year to get 3,000 *l.* by it; that expenditure was solely and entirely to improve the navigation, was it not?—No; I do not think so.

830. Have they any other interest to serve than to improve the navigation?—The money spent was not all spent in improving the navigation.

Mr. *Littler.*] Upon this class of questions, Sir, I should like to take your opinion; I have not seen Lord Salisbury's petition, but I cannot see that this

this is any fresh examination different from that which Mr. Rodwell has been pursuing. Mr. *A. Manser.*

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Chairman.] We must have some limit to this sort of examination.

Mr. *Nicholson.*] Lord Salisbury is a debenture holder to a large extent; and by the scheme proposed I am fearful that his interests (the money having been lent to trustees constituted in a particular way) may suffer; and I apprehend that this cross-examination is entirely within the limits of the petition.

Chairman.] But everybody cannot be undertaking to oppose this scheme. The promoters of the Bill are the parties to oppose it; the opposition must be limited to somebody.

Mr. *Nicholson.*] I am content with the proposal of the Bill, and therefore I am asking whether I am not in order in opposing this clause?

Chairman.] No; the promoters of the Bill would take care that if the debenture holders wish to make any proposition to the Committee we will hear them.

Re-examined by Mr. *Littler.*

831. My learned friend referred you to the Minutes taken before the Commission. I see that Question 4876, with regard to the weir was this: "Has it not been reconstructed to this day;" and your answer was, "It was reconstructed, but I did not get what I wanted; I had no appeal."

832. I see that in answer to Question 4880; you say that, "I think that if they paid more attention to economy, and exercised more care, and if instead of borrowing a large amount of money and raising these debentures, they endeavoured to be careful to improve the river out of income which they might very properly do, it would be very much better;" do you still think that?—Yes; I do think that if they had exercised more care, and had been careful of their expenditure, there would not be that great load of debt that there is now.

833. Do you think that an elective constituency of some kind, whatever that may be, would be a check on excessive expenditure?—I think it would be a very great check indeed.

834. I see your last answer here is, "Nothing, I think, except that I do hope that any recommendation which you may make may lead to some higher power being appointed to control the acts of the trustees, and to give us justice when we seek for it;" do you think that such a constituency as you propose to make would protect you in those interests?—Yes, I think it would.

835. Do you know what the number of barge-owners is?—I do not.

836. Were you speaking of the number of barge-owners, or the number of barges when you said 300?—I did not say 300, but some one else said it.

Mr. *Rodwell.*] I can give you the number, Sir. There are now only 72 registered barge-owners on the River Lee, and I believe about 170 barges.

Witness.] I know of 70, I think.

837. Mr. *Littler.*] My learned friend asked you about tolls; about the reduction of the tolls and what they were; is there one thing with regard to gravel which is rather peculiar; what does gravel from Hertford downwards pay?—Twopence.

838. What does gravel upwards pay?—Sixpence.

839. Does it cost the trust more to carry it up than down?—No, there is an owner in the case. Gravel from Mr. Parker's gravel-pit would be twopence, but back from London it would be sixpence.

840. Mr. *Surtees.*] Does the same difference in charge apply in the case of other articles?—No, it does not; if we take wheat down we pay 1 *s.*, but if we take it up we pay 1 *s.* also.

[The Witness withdrew.

Mr. *Richard Hunt*, called in; and Examined by Mr. *Littler*.

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841. YOU live at Stanstead, in Hertfordshire, do you not?—Yes, I do.

842. And you are a miller, maltster, and barge-owner?—Yes, I am.

843. You have been a trader on the Lee for a great number of years, have you not?—Nearly 30 years.

844. You have been acquainted with the constitution of the Lee Trust during the whole of that time?—Nearly the whole of that time.

845. In the earlier part of that time there were some traders upon the Trust, were there not; the majority were traders then who lived in the neighbourhood.

846. And that continued to be the case up to 17 or 20 years ago, did it not?—About that.

847. Up to that time were you satisfied with the way in which the navigation was being managed?– Yes, quite so.

848. Since that time the debt has increased, has it not, from 18,000 *l.* up to what it is now?—Yes, about that. When I say we were satisfied, the river was gradually being improved, and the tolls were gradually being reduced, and the debt likewise.

849. Are you, as a trader, satisfied with the present constitution of the trustees? No.

Chairman.] Nobody is; you need not go into that.

Witness.] It is a taxation without representation.

850. Mr. *Littler.*] Have you considered the scheme which I have stated shortly to the Honourable Members this morning, with regard to the representation?—Yes.

851. In your judgment, would that be a fair representation for all persons interested in that navigation?—I think that would be about a fair distance; I do not say as to a mile more or less.

852. That scheme would include the owners of property on the banks, and also represent traders on the river?—It is generally thought so.

853. It is the general view in your neighbourhood?—Yes.

Cross-examined by Mr. *Rodwell.*

854. Had you ever the curiosity to read Mr. Rendell's report in 1850 on the state of the Lee when he took it in hand?—I read part of it, and I saw Mr. Rendell several times.

855. Do you recollect that in 1850 he reported, "First, that the navigation is at present in a position of considerable jeopardy; it is upheld at a great expense of water, and nearly the whole of its works are so old and worn as to call for a large expenditure to prevent accelerated decay and early ruin. This condition is not the result of neglect on the part of the trustees or their officers; on the contrary, it is beyond all question that there is at this time as great a depth of water throughout the navigation as there has been for many years, but this end has been attained by raising the surface of the water in place of deepening the bed of the river, and the system seems to have attained its attainable limit, having regard to the safety of the banks, the convenience of the mills, and to the necessities of the drainage," and so on?—About that time I saw Mr. Rendell several times with Mr. Marchant; and a few days after I was travelling down with Mr. Rendell, who was going to Holyhead; and I joked Mr. Rendell, and I said, "You have made a good case to get a good job." I think the navigation at that time was nearly as good as it has been at any time. As a millowner I wish we had as much water now as we had then.

856. And you have not?—No.

857. With reference to the tolls, are they not 50 per cent. cheaper than they were 15 years ago?—No.

858. How much cheaper?—The tolls were very much cheaper on various things, but upon the materials I deal in, wheat and malt, they are higher than they have ever been for the last 20 years.

859. That

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859. That is as regards the millers?—Yes, the main staple articles of trade; but many other things are lower.

860. Do you know, or have you ever had the curiosity to inquire, whether there is any navigation in England where the rates are so low as they are upon the River Lee?—I have not made comparisons.

861. Was not flour 1 *s.*, and is it not now 6 *d.*?—Yes.

862. When you give me your answer that the tolls are no lower, how do you reconcile that with the fact that the tolls are 6 *d.* instead of 1 *s.* on flour?—We have wheat and malt, the carriage of which is very high. We applied personally to have the tolls reduced upon flour, but they would not listen to us for years, until the trade was all gone, and the carriage of flower is considerably less now than it was, and when the whole of the trade was gone they lowered the toll.

863. You do not attribute that to the railway, do you?—I attribute it to the fact of not lowering the toll in time.

864. Have you made any complaint to the trustees?—Yes, I have made the same as I have made to you.

865. Have you gone to Lord Salisbury and complained of the mode in which things have been managed?—I complained once to my Lord Salisbury, but he gave me such a short answer that I did not like to go again; the trustees agreed to charge me 1 *s.* 6 *d.* for a drain, and I went to Lord Salisbury, and he said, "Charge him 2 *s.* 6 *d.*"

866. I ask you, have you any complaint of a serious character to make to the Committee, to show that the trustees have neglected their duty?—I am not satisfied with the way in which they have discharged their duties.

867. What is the difference in price of the carriage of coals as compared with what it was 20 years ago?—I think the same remark applies to coals as to flour, that after they had lost the trade they reduced the rates.

868. And you do not attribute that to the railway system?—Yes, I do; they took it away.

Re-examined by Mr. *Littler.*

869. If the tolls had been reduced in proper time, you would have kept a considerable traffic upon the river?—Unquestionably; and the millers will bear me out in that.

870. You say that from your experience of the trade?—Yes, my books will show that; I make more flour now than ever I did.

871. You have only mentioned this one complaint, but is it the general feeling that the wants of the whole district would be better attended to by persons amenable to some elective responsibility?—Yes, certainly.

872. I believe you are one of the largest millers on the whole navigation?—Yes.

873. And that is your view, and the view of the whole neighbourhood which you have come to represent?—Yes, it is.

874. Mr. *Surtees.*] You said that there is not so much water in the river as there was 20 years ago; will you state the cause of that diminution?—The trustees have sold the water away from us.

Chairman.] That is all regulated by Act of Parliament.

[The Witness withdrew.

Mr. *Benjamin Wicks,* called in; and Examined by Mr. *Littler.*

Mr. *B. Wicks.*

875. You are a coal merchant and barge-owner at Edmonton, are you not?—Yes, I am.

876. And have known the Lee all your life?—Yes; ever since 1814.

877. In your judgment, would it be desirable, from what you know of the river, that a portion of the conservators should be chosen by election?—That is my opinion, and has been so for a long time.

878. Could you tell me of any instances in which the present trustees have

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not given satisfaction to the traders?—I have gone several times to complain to them, and I have never got any satisfaction. I have been obliged to get it by proceeding against them.

879. Sir *George Bowyer.*] What was the result of those proceedings?—On the last occasion they stopped my barge. I do the work for the Government, and I had got a large ship to coal, and likewise a steamer, and by stopping me they caused me to have to pay 20 *l.* demurrage for the sailing vessel, and 25 *l.* for the steamer. I told the trustees that I should hold them responsible for any loss that I might sustain by demurrage. My solicitor came up, and I agreed to stay proceedings till the trustees met, and they agreed to pay the expenses, which amounted to about 46 *l.*

880. Why did they want to stop you?—They wanted to charge me, illegally, 3 *s.* for taking my barge down. I had paid for taking it up, and I considered that sufficient.

Cross-examined by Mr. *Rodwell.*

881. If you have had complaints against them, they have had complaints against you, have they not?—Only once.

882. Why was that?—I knocked a lock off. I wanted to get my barge down on a Sunday, and I knocked a lock off.

883. Have you not been summoned for overloading your barges?—No.

884. You have been very angry with the trustees, have you not?—No, I was not angry at all. I considered I was not treated fairly, and I resisted.

[The Witness withdrew.

Mr. *George Webster*, called in; Examined by Mr. *Littler.*

Mr. *G. Webster.*

885. You live at Broxbourne, do you not?—

886. And are a miller and barge-owner, are you not?—Yes, in co-partnership with my brother.

887. You have only one barge exceeding 20 tons, have you?—One barge.

888. And with that barge you carry on one of the most considerable businesses on the river, do you not?—We do an average business.

889. Will you tell the Committee the number of tons that you carry up and down?—I cannot; but I can tell you our returns in a year.

890. What are your returns?—150,000 a year.

891. *Chairman.*] By this one barge, in the year?—We use the railway also.

892. Did you do that business with that one barge?—We do not do that business with that barge alone, we use the railroad also

893. What do you carry by this barge?—We bring oats and wheat.

894. How often does it go up and down?—Four times in three weeks.

895. Four times in three weeks you take a barge load down the river?—Yes.

896. That is the extent of your business?—We carry sometimes back.

Cross-examined by Mr. *Rodwell.*

897. Is that your proportion of 150,000?—Yes.

898. I suppose you find the railways better than the navigation, very frequently?—We go back empty sometimes; we have not sufficient accommodation by the river.

899. Did not Mr. Manser want the trustees to take two inches off the tail of your mill?—Not since we have been there.

Re-examined by Mr. *Littler.*

900. You are considerably interested by reason of your trade in the care of the navigation, otherwise than by the mere ownership of this barge?—Very much so, I think.

[The Witness withdrew.

Mr.

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Mr. *Littler* stated that that was his case upon that proposition.

Mr. *Round* was heard to address the Committee on behalf of the Local Boards of Ware, Cheshunt, Waltham Cross, and Stortford.

Mr. *Denison* was heard on behalf of the New River Company.

Mr. *Bidder* was heard on behalf of the undertakers of the Stort Navigation, and claimed that until they were purchased, they were entitled to be represented upon the Board.

The *Chairman* stated that it was arranged that until such purchase, the rights of the Stort Navigation were not to be interfered with.

The *Chairman*, in reply to Mr. Sargood, stated that the Committee had resolved not to give a separate representation upon the Board to each town.

The Committee Room was cleared.

After a short time the Counsel and parties were again called in.

The *Chairman* stated that the Committee, having considered the several proposals which had been made to them for constituting a new Board of Conservancy, had determined to pass the Clause in the following form: That five members shall be elected by the trustees; one by the owners of barges used on the Lee; one by the heads of the local authorities of the places mentioned in Schedule A to this Bill; two by the New River Company; two by the East London Waterworks Company; one by the Mayor, Aldermen, and Commons of the City of London, and one by the Metropolitan Board of Works; making, in all, 13 members of the Board. That they had also determined that the Bill should be amended as regards the body who were to elect the trustees, by extending it to all the riparian freeholders of property of the value of 100 *l.* a-year on the rivers named in the 3rd Clause of the Bill; that that would be the ultimate electoral body of the trustees. That the towns to be scheduled in the Act should be towns having a population exceeding 5,000, and having also a local Board, or municipal Board of some kind, and constituted under some general or local Act. That, with respect to the town of Hertford, it would be for that town to consider whether the mayor should retain his electoral position, or whether they should be put in the Schedule of Towns and elect with the other towns; that either course was open to them. That with regard to the other trustees who were represented upon the Board officially, they would be struck out: namely, the Mayor and Aldermen of the City of London; seeing that they were constituted the electors of a member directly to the Board; and that the New River Company, having the power of election, would be struck out. That there appeared to have been an error in respect that the Member for Rochester was named a member of the Board; that he would be struck off.

Mr. *Wilkinson* inquired whether the riparian owners should be in substitution or in addition to the present electors.

The *Chairman* stated that the present freeholders would remain as they existed, and would not be deprived of their electoral rights.

[Adjourned to to-morrow, at 12 o'clock.

REFORM CLUB
PALL MALL

Thursday, 30*th April* 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Powell.
Mr. Benyon.	Mr. Sheridan.
Sir George Bowyer.	Mr. Surtees.
Lord John Hay.	Mr. Wise.
Mr. Alderman Lawrence.	

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

Robert Rawlinson, Esq., C.B., called in; and Examined by Mr. *Wilkinson*.

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901. IN your report you have divided the watershed of the Lee into three divisions; first, the upper district above the intake of the New River Company at Hertford; secondly, the middle district between that point and the intake of the East London Waterworks at Ponder's End; and, thirdly, the lower district to a junction which comes down at Blackwall; do you think it desirable that a different mode of treatment should be adopted with respect to the sewage from those districts?—The Members of the Commission in framing this Report considered that the district above the intake of the water companies, and the towns situated upon that district, should so treat their sewage as to remove all offensive matter before passing it into any streams that subsequently flowed down to the metropolis for the supply of London with drinking water. We have come to the conclusion that we know no method which will so improve the water as to make it unobjectionable other than by irrigation, that is, passing it on to and over land. We think that all populations up to 10,000 may very reasonably be expected to treat their sewage by irrigation. Villages and smaller populations may probably desire to resort to some other mode, such as the dry earth-closet, or some mode of dealing with the excreta so as to prevent it going into the streams.

902. I understand you to say that so far as regards the district above the intake of the New River Company, it is desirable that the water supply should be sufficiently pure for all drinking purposes?—That it should be clarified by the best known processes where it has to be used subsequently for drinking and other domestic purposes; and we know of no mode which will accomplish that thoroughly than by passing it on, to, over, and through land.

903. That is, distributing it over the land for agricultural purposes, and then suffering it to fall into the river after it has been completely purified and clarified by mixture with the land?—That the effluent water shall be clarified up to the standard required at Croydon.

904. Then that remark of yours would apply particularly to the towns of Luton and Hatfield, which are the only towns of importance above the intake of the New River Company?—Yes.

905. With regard to the villages and houses in that district, you recommend the adoption of the earth-closet?—The dry earth-closet is represented to be now so perfect in its arrangement that it can be used with great advantage by single houses,

houses, and it is also being applied very extensively now to barracks and even to villages.

906. But I understand you would adopt, as your test of purity, the test adopted at Croydon?—For the clarified water; I should be very sorry to dictate to any town or village that it should use the earth-closet, that is to say to specify any method, but I merely name that as a means of their getting out of their difficulty; if they can find an equally good one, let them use it.

907. How would you propose to ascertain and enforce a standard purity of water?—Simply by chemical analysis, as is required at Croydon.

908. Is that under referees appointed by the Board of Trade?—I do not remember. The Chancery injunction defines it; I know they constantly have it tested.

909. I see in your Report you notice specially the nuisance arising from sheep washing that takes place more particularly in the upper districts; how would you propose to deal with that?—If the sheep washing is placed under certain restrictions, if you do not allow any sheep washing to take place within a defined distance of any intake, I think we may assume that any evil will be obviated and will pass away before it comes there. I do not think you can stop it.

910. You think, then, the pollution arising from that source would be sufficiently obviated by requiring that the water used for the sheep washing should be at a certain distance from the tributaries, or from the outlets of the river, that there should be no washing in any stream direct; that it should be in a side pond, and that that side pond should not be established within some limited distance which could be specified?—

911. Let me take you shortly to the middle district, which comprised a great many towns. In your Report you say that Hertford, which is the first of those towns, would more properly come into the upper district, because it is above the commencement of the New River?—Yes.

912-13. Now, directing your attention to Hertford, Luton, Hoddesdon, Broxbourne, Cheshunt, Waltham Abbey, and Waltham Cross, do you think that the system which you have recommended for the upper district could with advantage be applied to those places in the middle districts?—I do not see that you can make any difference there. It has been suggested that a large intercepting sewage should be made to connect all those towns, and to take the combined sewage down into the lower valley of the Thames, and either pass it into the Thames with the metropolitan sewage, or utilise it; but I fear myself that the remedy would be almost as bad as the disease. Such a work would be very costly. You would be doing what I hold would be bad engineering. You would be massing a nuisance; and, in my opinion, each town which contains a population of 8,000 or 10,000 may reasonably be expected to deal with its sewage by irrigation profitably.

Chairman.] You have the Report of the Committee in your favour upon that point as well as the Commission. It is rather for the other side to impeach it.

914. Mr. *Wilkinson.*] Do you draw any distinction between Enfield, which has a larger population, and the other towns in the middle district, which you have just described?—Yes; there are two modes by which the lower districts of Enfield downwards may be reasonably called upon to utilise or get rid of their sewage; one mode would be passing it into the metropolitan outfall, if that is the outfall, and if the Metropolitan Board of Works would take them; if that is not practicable, and the Metropolitan Board of Works will not take them, then they are below the intake of both companies, that is, both the New River Company and the East London Waterworks; they may, I think, be permitted to pass their effluent water into the conduits below that point after it has been filtered and clarified to a standard to be established, the inspection to be placed under a Government Board. Those districts below the intake of the two companies, such as Tottenham, and even Enfield, by an intercepting cut, may bring their clarified sewage down, and pass over away into the navigable channel of the Lee, and otherwise down the Thames.

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915. The answer which you have just given with regard to Enfield applies to the middle district, and extends also down to Tottenham?—Yes.

916. Then in fact, for Enfield you recommend the same system which you recommend with regard to Tottenham, and the towns in the lower district?—Yes, I do.

Cross-examined by Mr. *Cripps*.

917. With regard to what you spoke of as to the houses and villages, you say you have considered that matter, and you suggest that they should all be compelled to adopt earth-closets?—Or some equivalent to the earth-closet.

918. I want to know what was in your mind in making this Report, and what it is that you suggest?—The thought in my mind is this, that they shall be distinctly forbidden to pass, by the present construction of privies, the whole excreta direct into the nearest stream.

919. I want to know what it is, in your opinion, you propose as an available substitute?—You can remove the privy where it hangs over the bank of the stream, as many dozens of them do, to some distance behind. Then you can adopt an earth-closet, or any equivalent for an earth-closet; for instance, there are many private gentlemen, some in the valley of the Thames, who find it very greatly to their advantage to utilise the whole of their slop water and sewage. They have a water-tight tank, into which the whole drains, and they either remove it by a water cart or their gardener pumps it out by means of a hand pump, on to their land. A gentleman who keeps a gardener can be required to do that, but a cottager cannot be required to do that; it must be done for him by some proper authority, or by this company, who are now professing to contract both with towns and companies to supply earth-closets, to manipulate the whole process, and to free them from all nuisance.

920. I have not yet had an answer to my question, which is this—I want to know what it is you have in your mind, and which you suggest as the best way of getting rid of the sewage, both in the case of gentlemen who have gardeners, which of course would apply only to very isolated cases, and in the case of cottagers and the various inhabitants who may occupy houses near the stream?—It is not because I do not know many ways, but because I do not conceive it to be my duty to dictate or to point them out. We know very well that you can easily find the means. I would rely on prohibiting the fluid and solid refuse from going into the stream, and leave it to the parties to find out what they can do with it.

921. You are unwilling to pledge yourself to any scheme which you would recommend at the present time?—I would not like to say dictatorially, that you shall have the earth-closets, and nothing else; that would be very wrong. I was sanitary commissioner to the army in the Crimea. The army, although they were in the open field, and the French especially, were poisoned with their own excreta. They dug the ordinary latrine, and it became a most abominable nuisance. The accumulation of the excreta of thousands of men in the field was the cause of fearful nuisance. The remedy was as simple as possible. It was to cover the excreta with earth and remove the latrine from time to time as it became a nuisance, and so get rid of the offensive matter. There is not a cottager in the valley of the Thames who may not use that; that is to say, who may not deposit his soil in some manner so as not to be offensive to himself or his neighbours.

922. You do not suggest any analogy between the case of an army of thousands of men congregated together on one spot, and the case of a few isolated cottages on these streams?—No; but there was just the same difficulty resulting in the case of the army.

923. You do not pledge yourself to any definite scheme that you would suggest?—I would simply forbid pollution of a stream.

924. And throw the difficulty or expense upon some other party?—Just so. I think that a very right and reasonable thing to do, when other parties are to be the drinkers of the water.

925. There is one matter to which you referred, namely, the sheep washing; you

you say that goes on to a considerable extent at present in the stream?—It does; at least we are told so.

926. You are afraid of the arsenic coming down the stream from the sheep washing?—I do not say we are afraid of it. We took the evidence as given to us.

927. It is in your report?—This report is supposed to be an abstract of the evidence.

928. What time of the year are the sheep dipped in the arsenic?—I am not a farmer.

929. The extent of the pollution must depend on the time they are dipped in the arsenic, and the time they are washed?—I believe that the sheep are not dipped at the same time that they are washed, and therefore it would modify any nuisance arising from the washing of the fleece.

930. They are not only not dipped at the time when they are washed, but there is a considerable interval between. Do you know what are the relative times of year when sheep are dipped and washed?—That question you must ask an agriculturist.

931. Did you put your name to this report without inquiring into so material a matter as that?—If I did, I have forgotten it. There are a number of things in the course of my life which I learn, and try to forget them as soon as I can, because I have other things to learn.

Cross-examined by Mr. *Ashley*.

932. I think I gather from you, that in your opinion it is the first duty of any aggregate of persons, however small, to pay for the disposal of what may benefit them but which must hurt their neighbours?—Most unquestionably, and we have attempted to lay down in our several reports, that the portion of the community which poisons the water necessary to the well-being of the rest of the community, whether it is to their profit, or whether it is to their loss, shall be called upon to pay for its clarification and purification.

Cross-examined by Mr. *Sargood*.

933. I think you told us a few days ago, that you had read the Bill now before the Committee?—Yes; but it has been altered since then.

934. Not in any material respect?—If you are about to ask me with reference to any particular class, will you call my attention to it.

935. I want to ask you about the sections which we are now on, namely, the purification of the river; do you think that this Bill developes a good scheme for accomplishing that object?—I think so, as far as I have read it.

936. Just let me call your attention to one of the provisions in it, which enables the Conservators of the stream to stop up a sewer or drain if it is ejecting matter that they do not like; do you think that that is the best way of getting rid of the nuisance that is complained of?—No, I do not; you may put it in the Bill, but you cannot do it.

937. I think, with your ingenuity and the attention which we know you have paid to this matter for so many years, you could develop a better scheme than that; what scheme would you recommend for getting rid of the nuisance?—If I were despotic?

938. Well, I will take it in that way first, although I do not want despotism, I confess?—If a town would not do its necessary work—take Luton for instance—if it were to lay its hands down and make no attempt to improve the state of things, but let things go on as they are going on, I should like very much to see a Parliamentary power enacted, by which some branch of the Government should be able to send an engineer down to devise the proper works, and to give them notice that such works are devised; and if they will neither adopt them nor carry them out, that they shall be carried out by the Government, and the rates be made answerable for their cost.

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939. You think that would be a much less crude scheme than the one suggested by the Bill?—No doubt it would. That would be practical.

940. I tell you very honestly that if you should recommend such a scheme in your Report, we should have been one of the first to have congratulated ourselves upon the chance of its adoption. You have referred to Luton. I may put it, you have given some attention to that town, knowing well what it has done. Looking to the operation of this Bill on that town, as the Bill now stands, do you not think that Luton forms a very exceptional case to all the other towns upon the river?—No; not exceptional, as requiring an exemption; certainly not.

941. I am not speaking of that; I mean exceptional as to the particular effect it would have upon the the town which has already incurred so great an outlay, other towns not having done so much?—I think, so far as Luton has carried out these intercepting works, and so far as it takes out the solids from its sewage and clarifies, by the use of lime, what remains, that it removes a great part of that which produces the greatest amount of mischief. That, I admit, goes a very great way towards rendering the sewage innocuous, especially as it has to flow so long a distance before it comes down to the New River Company's intake; but, nevertheless, I think Luton ought to be compelled to do both works, and to pass its sewage on to the land, even at its own cost.

942. Supposing that Luton fancied, and more than fancied, proved that it had not the means of raising money to do the works in the way which you think better, by irrigation, will you tell me how you will devise a scheme for compelling, as you say, Luton to do it. Because we want to be helped; we are very anxious to do it if we can. Do you know any better way than the one you have suggested, that those who promote this Bill should take power for doing the works, leaving the ratepayers to take the thing into their own hands?—If the Luton people throw their own hands down, and say, We have not the means, the law must take its course. With regard to stopping their sewer up, that will not lessen the nuisance one hair's breadth; but will increase it. They have the power of throwing themselves back, as it were, and of saying, We will do nothing. I know cases in point, of towns that are in that condition now.

943. You might imagine, probably, the same result to occur from Luton, changing the phrase you have given, instead of saying, We will not move, saying, We cannot move?—I know it, and I can quite understand this, that the representatives of the Local Board of Luton may be active and willing to carry out the law, but they represent ratepayers, and they represent a very obstinate and pig-headed race of people sometimes.

944. Are you alluding to ratepayers generally, or to the Luton ratepayers in particular?—I am not alluding to Luton ratepayers especially, but ratepayers in general. It is most notorious that over and over again a mob of ratepayers (and a mob of anything is very unreasonable in their mob capacity) is very unjust; and I know of my own knowledge that the persons representing the ratepayers have intelligence enough to know what they ought to do; but their hands are tied behind them by the men who send them to the board. I also know this, that a board, not only wishful but determined to do its duty, and which sets about doing its duty, are at the next election superseded by an obstinate board, who are returned for the express purpose of undoing what their predecessors have begun. That, I think, is a defect in the law.

945. All that brings us round to the advocacy of your original suggestion, that the right, and the power, and the necessity for doing it should be conferred upon the conservancy, and not upon these changeable boards?—I think so. I give them all the fairest possible chance. I give them intervals of chance where they could resume their duties and take up their works; but they should not lie idle and let the nuisance go on accumulating through their obstinacy.

946. Now, let me ask you a question upon another subject, and that is with regard to these frequently occurring words, "offensive or injurious matter." Who is to be the judge of the matter being "offensive or injurious;" because I see there are some heavy penalties connected with it?—As in the case of the Nuisance Removal Act, they must be either medical men or properly appointed referees.

947. Sir *George Bowyer.*] Would not the question come before the magistrate to whom application is made for a conviction under the Act?—It would.

948. He

948. He would hear skilled witnesses?—An inquiry of that kind is very redundant, costly, and unsatisfactory. With reference to the opinion of medical men, I am sorry to say, you will get the foulest nuisance which can be created in this country supported by professional witnesses, who will declare it is no nuisance at all, and when a case has to be supported by such evidence, there is litigation piled upon litigation, and evidence given which ought to make the persons blush who give it; and the magistrates cannot convict for the most notorious nuisance.

949. Mr. *Sargood.*] Then we do arrive at this: supposing the matter is to be decided by a magistrate, he is to sit as a sort of jury, and to take the evidence of medical witnesses who, as you tell us, will give the most directly contrary evidence on both sides of the question?—Some will.

950. That is not a very rapid way of getting to a solution of the sewage?—I think you will find, before you have done, that a proposition will be made to the Committee to refer all matters relating to the condition of purity, and other matters, to some referee to be appointed; a Government officer.

951. I should very much like to have known that; really we are struggling here against being involved and embrangled in no end of litigation, without any satisfactory result or tribunal; if we could see something that would protect us against this, it might be more satisfactory; let me ask you again with regard to the words "offensive or injurious," is there to be any test as a sort of standard of purity by which those words are to be controlled, because the Bill does not provide that?—I should say with regard to any clarified water, or water said to be clarified, that there necessarily must be a standard of purity to which it must come.

952. In the absence of all that, the conservators would be the moving aggressive power, and the towns would be put on their defence?—Just so.

953. That is what you propose?—Yes.

954. But it would get rid of the whole of that probability of litigation if the conservators were the persons who were responsible for dealing with sewage in the way you have suggested?—If the conservators were armed with powers, and had power to levy rates upon the local board in proportion to the cost of their works, I do not see why they should decline it. I think you will find that if you get power to put that sort of screw upon the local boards, that is to say, execute works for them, that you should limit the rate so that it shall not exceed a certain rate in the pound for any works that are devised, and you will find that when you have once got that power established, the local boards will very rapidly find the way out of their difficulty, and will do their best. That is the case with West Ham. The Dagenham Marsh Commissioners got power to levy a rate not to exceed 1*s.* 6*d.* in the pound; they thereupon said, "We will drain ourselves," and they have drained themselves most effectually.

955. I think I do not misrepresent your views, so far as I gather them from the nature of your inquiry and your reports, when I say that it is your opinion that irrigation, for the purpose of clarifying sewage, is a remunerative process, and not an exhaustive one?—Most unquestionably with such land as you have in the valley of the Lee. With such facilities as you have there for disposing of the produce of that land, I cannot conceive of a more profitable investment than for the sewage of Luton to be taken on to an equivalent area of land, whether it is 100, 200, or 300 acres. I have no hesitation in saying, as I sit in this chair, that if it be done with economy, that they would very quickly find a tenant who would take the land, farm it himself, apply the sewage, and relieve them from all difficulty and responsibility, legal and otherwise, and pay them a remunerative rent. I have no hesitation in saying so.

956. I fancied that that was your view. That would arrive, would it not, at launching us into this idea, that if the new Board of Conservancy has thrown upon it additional powers and obligations that require an accession of funds, instead of those funds being raised for the purpose of being spent in litigation, the conservators might derive an accession to their funds, undertaking the management of the sewage into their own hands?—I do not anticipate that the Committee will give the conservators absolute power over the sewage of any town.

957. I am not taking the liberty to anticipate what the Committee will do, I am only anxious about what they will think when they have heard your evidence?—I do not imagine that any town would permit its sewage to be abstracted when they

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have the choice. When by forcing it into doing what it ought, it will see its advantage in carrying it on, and I think it will be very glad to find that it has been forced into that course.

958. Without asking the Committee to go so far as the language of the Bill, and enact powers which might be inconvenient at this moment, you are of opinion that the best way to compel the towns to keep their sewage is to give the conservators the privilege of laying hold of it if they like?—I think that will be a very good way.

959. And you think it will be a much better way than proposed?—My opinion upon that is, that you may put the words into the Bill, but that means nothing.

960. Practically it is inoperative?—It must be inoperative. Take, for instance, the Thames Navigation Bills, take Oxford and Reading, and all those places, and suppose those sewer mouths blocked up—I cannot suppose it.

961. Suppose our Board at Luton have no power to buy land, how are we to irrigate it?—The Sewage Utilization Bill gives you power. If you have not the power to buy land, you surely can lease land. People are ready to let or lease land to local boards, especially if they will give a double rate for it. The Croydon people obtained possession of their land, and positively did pay more than double the agricultural value that the land ever let for before; and they not only found their way out of their difficulty of paying that accession of rent (and they pay from 4 *l.* to 5 *l.* per acre for land that never let before for more than 30 *s.*) when they had taken their sewage in the rudest way to that land, they found a tenant who has worked it from the first, and who is working it now, and that tenant will show you everything and tell you everything except one thing; he will not tell you how much he makes.

962. Have you any idea with regard to Luton (we having already spent between 13,000 *l.* and 14,000 *l.* in these works) how much more money we should have to sink in order to irrigate?—I have not gone into it in detail; I should imagine that in Luton it is quite practicable to gravitate on to the land.

963. I am told it is not?—Then we will assume that it is not; 6,000 tons per acre per annum is considered, and has been considered by the Royal Commission inquiring into the application of sewage, as the best volume of sewage to put on to land to get the rental value out of it. Supposing you have to lift those 6,000 tons 50 feet by engine power, the working cost of lifting it would not exceed 16 *s.* per acre for the 6,000 tons. If you have to lift it 100 feet it is double that; that is taking the Thames Valley price of coal.

964. Do you think that Luton can do this by gravitation within a distance of 50 feet, or three times 50 feet; do you know enough of the town to tell me that?—I did not attempt to look at it with the eye of an engineer. Supposing you had to lift it 150 feet, that would be three times 16 *s.* per acre; I tell you unhesitatingly that, with that volume of sewage upon an acre of land, I believe that you would get from a tenant from 5 *l.* to 10 *l.* per acre as a rent, and that the tenant if he cultivates it as he ought to cultivate it, would clear into his pocket another 10 *l.* per acre.

965. Lord *John Hay.*] You say that you think the sewage might be utilised in the neighbourhood of Luton; do you mean that which passes away now in some way, and which is utilised in the manufactures of the place?—Yes.

966. Would the sulphate of copper, indigo, nitric acid and other things be beneficial to the produce of the land?—Professor Way, who is here, will be better able to speak to that than myself. They are small in quantity. I think you will find it mentioned in our Report that the volume of chemicals is so insignificant in comparison with the great volume of sewage, that it would not be injurious. I take the case of Birmingham, where the ingredients are far more injurious. There is what is termed pickle waste, that comes from the lacquering of the metal wares of Birmingham; a vast quantity of that goes into the sewage. They have used the sewage of Birmingham over the land and utilised it there; they turn the whole of this pickle waste on to it, and they not only do not injure the land, but it gives magnificent crops. All the weight of solids in Luton bears a very small proportion to the vast bulk of water.

967. Mr. *Surtees.*] Is it the case that you can lift the sewage double the height, by simply doubling the cost?—Yes, the law of mechanics is progressive; if

if you have to lift a weight one foot, it costs you double to lift it two feet, and so on; it costs you more in comparison to lift a small volume per acre, than it does to lift a large one, because the engines, as they are increased in size, something like the large engines in the metropolis, can lift 90,000 gallons of water 100 feet high, at a working cost of 1 *s.*

968. What would be the cost of works necessary to deposit sewage to the amount of 6,000 tons?—That would be very small; to lift the sewage of Luton it might perhaps cost you for engines, boilers, pumps, and all the machinery connected with it, 5,000 *l.*, that would be put to the capital account, and the working expenses might be 500 *l.* per annum.

969. Mr. *Powell.*] Does that 5,000 *l.* include any sum for conduits or pipes, or anything of that kind?—No, I should say not, for engine-house, pipes, and conduits, down to the amount it may cost you for laying out the land, according to the condition it is in, from 20 *s.* up to 3 *l.* or 4*l.* per acre.

970. What length of conduit do you include in your estimate?—That would depend entirely upon the position in which you can get the estate.

971. The 4,000 *l.* or 5,000 *l.* might have some reference to the conduit pipes?—I would rather take it as plans upon the ground, without any intermediate conduit pipes.

972. Sir *George Bowyer.*] Would not the expense of the land depend on whether the sewage was spread by gravitation?—It must be spread by gravitation if it is to pay. It will not depend so much upon the contour of the land, as upon the intelligence of the men laying out the contour grips. Many of the so-called sewage-farms have been almost ruined by the extravagant utilising level of laying out the land which is not required. If it is meadow which has not been ploughed up, you can put your contour grips in any shape that the land requires.

Cross-examined by Mr. *Littler.*

973. Do you know Messrs. Cook and Son's works, the East London Soap Works?—No.

974. You know the part of the river between Old Ford Lock and Bramley Lock?—Yes.

975. That is considerably below any water intake, is it not?—Yes.

976. With regard to that part of the river, what you said in your examination as to the other parties who had the drinking of the water, and as to the persons who create impurity in the water, would not apply?—Why not?

977. Is not that very much below any possible point where any injury could arise to the water above?—Are you now speaking of the special manufacture of soap?

978. I am speaking of Messrs. Cook's soap works, and nothing else?—They are on the borders of the West Ham district?

979. Yes?—I will tell you what my opinion is, that if there is a special nuisance created by those works, and there are very bad nuisances with regard to soap works——

980. I did not say if there was a special nuisance, but if there is a special matter?—You are partly in West Ham and partly out of it.

The *Chairman.*] Can you tell us how many miles the outfall of their drain is from the junction with the Thames?

Mr. *Littler.*] I am told it is about two and a-quarter miles from the Thames.

981. (*To the Witness.*) It is a very considerable distance, is it not, below the point at which the water is taken out?—Yes.

982. With regard to anything coming from the drain, unless it affects the health of the immediate district, it could not injure the river?—Do you mean by passing into the river?

983. Yes?—I think if they make any nuisance.

984. I have expressly barred you from that. I say, supposing it is not a nuisance, in the ordinary sense of the word. I may take it first with regard to the purity of the water for drinking purposes?—If there is a sewer which they can drain into, I should not let them go into the river. I believe there is.

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985. We are going to prove there is not?—If there is not, I would compel them to clarify, or to disinfect up to the standard, and place them under inspection.

986. Are you aware of any standard by which that which is now infectious can be gauged?—I, perhaps, know more about soap works than you think I do.

987. I did not say you did not?—The solids that they make should be taken away as they are made, and the fluids that they pass away, should either be disinfected to a standard, or should be drained away where they will be treated; they should not go into the river.

988. In a body like that, which there is here, there being no water taken away from that place for drinking purposes, could you say anything, if there is no other place into which they can drain, against their draining into the river?—I say as I said before, that they must clarify up to a fixed standard. What that standard is I am not prepared to tell you.

989. For whose benefit?—For the benefit of the general community. That will be one of our recommendations in our next report. We shall recommend that soap works, alkali works, chemical works, and all descriptions of works of that sort shall not be allowed to pollute the river until they have done all that science would teach them to do with regard to getting rid of every possible nuisance.

990. What I am trying to get from you is with regard to this particular instance of these works at Old Ford, which is to be injured by its being thrown in?—You would accept the water.

991. Who is to be injured?—You do not hold that it is a nuisance.

992. No; but who is to be injured, supposing it is?—I do not know what combination would take place between the refuse thrown in and the banks.

993. Who is to be injured?—The persons living on the banks of the river.

994. Are there any large number of persons living on the banks of the river who would be injured?—It is thickly inhabited, and will be more thickly inhabited.

995. Do you mean to tell me, that the quantity of stuff thrown in from Messrs. Cook's works, is sufficient to injure the health of the persons living on the banks of the river?—Whether it is much or little, it should not go in until it is dealt with up to a standard to be fixed. That is my view; I make no exception.

996. Supposing it does not injure the health of the people, in the neighbourhood, at all events you do not contend that it injures the water supply?—No.

997. Just to come back to the question which I was putting you, this clearly does not affect the water supply, does it?—Not the metropolitan water supply for domestic purposes.

Chairman.] You need not pursue this line of examination with this witness, because he does now know the exact locality of the place.

Cross-examined by Mr. *Stanhope.*

998. You were asked, in your previous examination, about a point near Ware, where the New River Company discharge the sewage into the river, and where they have tanks. I think you describe it as a deposition in lime; you said, after taking out the solid matter, that it left clear sewage water, is that so?—Is it described in this report?

999. I am alluding to the evidence which you gave the other day when you were examined—Questions 98 and 99, the second day of the meeting of the Committee; what I want to ask you is this: when you spoke of the effectual means of getting rid of the sewage, did you include the clear sewage water, such as would be produced under that process?—Yes.

1000. Did you include clear sewage water under the term sewage?—Yes.

Cross-examined by Mr. *Wilson.*

1001. You gave unfortunate West Ham a few kicks by saying that we had behaved very badly?—I did not say that you had behaved badly.

1002. You

1002. You said that West Ham would not drain until compelled?—That is 10 or 12 years ago.

1003. We have behaved very much better since, and have tried to do all that could be done, have we not?—Most unquestionably.

1004. You have seen clauses actually prepared and settled, I think, with the promoters of the Bill, and you have approved of these clauses which West Ham has prepared with regard to the gravitation and disinfecting their sewage?—That is so.

1005. Are the Committee to understand that, as far as your approval goes, you actually approve of those clauses as a sufficient protection in the case of West Ham?—I think if you clarify to such an extent as may be established by inspection, that you may be permitted to use the lower outfall for the effluent water.

1006. Mr. *Powell.*] You will greatly prefer their obtaining access into the Metropolitan Main Drainage, and discharging into the great outfall at Crossness Point?—The West Ham people?

1007. Yes?—If the Metropolitan Board of Works will take them in, that would be the remedy both for them and for Tottenham.

1008. Assuming all done as regards arrangement and mechanism, you would prefer their discharging at Crossness Point to discharging into the Lee?—I do not know that I would, as far as the purification of the river is concerned. In my opinion, under existing circumstances, the river would be better purified by compelling the clarification of the sewage on their own premises, than by even pumping into the metropolitan outfall, where no such clarification takes place.

Cross-examined by Mr. *Michael.*

1009. You are well acquainted with the Tottenham Local Board of Health and the works they have constructed for the purpose of getting rid of their sewage?—I am.

1010. You are aware, I believe, that they have expended 60,000 *l.* on their sewage works?—Yes.

1011. And that they have expended considerable sums of money in attempting to purify their sewage matter?—They have.

1012. Are you also aware that an injunction has been obtained against them, restraining them from sending any sewage matter into the River Lee?—That I have heard.

1013. You are also aware, I believe, that their outfall is very considerably below the intake of the water companies?—Just so.

1014. Will you kindly tell me what is your opinion as to a local Board of Health placed under such circumstances; what is the relief that should be afforded to them by a Bill of this kind, in order to enable them to discharge their effluent water, when purified, into the river?—To place them under restriction as to the condition of their effluent water. You have only two modes by which they can be dealt with; you must either go into the metropolitan outlet, or into some new outlet which will be equivalent to it, or you must deposit and disinfect.

1015. I will take you over those three points, just for a moment; are you not aware that the Metropolitan Board of Works have sternly refused any accession of sewage to be passed through their works, as being inadequate to take in any further amount of sewage matter?—I am.

1016. Your second point would involve a very large expense to carry the sewage matter to Barking Creek?—It would.

1017. You are aware, perhaps, that the Tottenham Board of Health have employed Mr. Bazalgette to look over the whole of the district, and to lay down a scheme offering facilities, and that is the only scheme which he can propose to the Tottenham Board?—It is.

1018. Would not the interest of the public be served if a clause was inserted into this Bill that, subject to the opinion of a scientific body of referees, the effluent water, the solid matter being discharged from it and being purified by lime, might then be discharged into the Lee?—I think that that may very

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reasonably be permitted. It is the most direct solution of the Tottenham difficulty.

Mr. *Littler* requested permission to cross-examine on behalf of the towns represented by Mr. Round, who was engaged at that moment in another Committee.

Cross-examined by Mr. *Littler.*

1019. With regard to Ware, do you know that Ware has been at a large expense for the purpose of bringing in the flood water only?—I really do not remember.

1020. Will you, just for a moment, assume that that is so, and allow me to ask you what you have proposed to do with those flood waters?—I am not sorry that you have asked me that question, because the flood water of the entire district must go away. The water has always gone and must go down the river. You cannot deal with the floods.

1021. That must always go into the river?—It must.

1022. What do you propose to do with regard to Ware; you know that there is a great deal of water used in the maltings; I am told 37 millions of gallons at a time?—Yes.

1023. What do you propose to do with that?—To irrigate with it.

1024. You would not allow that to go into the river?—No; I think it gets mixed with the sewage.

1025. I am told a great deal of that will come into the flood water?—If you look at our Report, at page 12, you will see what we say as to the malting fluid, that it is not in itself injurious. "Water that has steeped barley is not in itself injurious if it is allowed to flow away continuously immediately. If it is left mixed with sewage, and stagnates until fermentation sets in, it then becomes offensive."

1026. You would not so very much object to it, if it were allowed to flow away continuously?—No.

1027. Now, with regard to Cheshunt and West Ham, those are both places of fewer than 5,000 inhabitants; would you propose to exclude all sewage from them?—Yes.

1028. Entirely?—Yes.

1029. The same answer would apply to the flood water?—The flood waters must go. No engineer can deal with them.

1030. I presume, then, that you would have no objection to the malting water, which is not allowed to stand, but which goes direct into the river and unmixed with the sewage, still to go on?—I do not think it would do any harm: it would be a weak kind of beer.

Cross-examined by Mr. *Nicholson.*

1031. You are aware that the 3rd clause of the Bill includes, under the head of Tributaries of the River Lee, "all streams flowing mediately or immediately into the Lee," or into any of the rivers or brooks which are mentioned in that clause?—Yes.

1032. It was a recommendation of your Commission, was it not, that the whole of the watershed of the Lee should be included in the Bill which you recommended to be brought in?—Yes, the entire valley of the watershed.

1033. Are you of opinion that the powers of the Conservators, who are proposed to be established with reference to these streams, should be confined to non-pollution purposes?—Just so.

Re-examined by Mr. *Wilkinson.*

1034. That is carried out by the Bill as it is now before the Committee, is it not?—Yes.

1035. One word as to the examination of my friend, who put some questions to you on behalf of Mr. Round, as to the nuisance arising from the malting; you

you have already said that the flood-water should pass off?—It must, you cannot help it.

1036. I presume the refuse of the malting water which passes into the stream at the times of flood, and so becomes mixed with the flood water, is to be regarded as a nuisance?—It would; there is more or less nuisance, and more or less solids in the flood water; we cannot help it, they must be dealt with; the filters take them out.

1037. With regard to Tottenham, you have already stated you would be satisfied if they purify up to a certain standard, to be defined by a referee, in fairness to all parties, and then discharge their sewage as they now do?—I would not say, as they now do; they might probably be required to carry it some distance below; I cannot say exactly. But they should use the channels of the river or the conduits for carrying away the clarified water.

1038. They might use the conduits, or channels, after the water had become clarified to a certain standard of purity?—Yes.

1039. With regard to West Ham, I think you had no evidence on the Rivers Pollutions Commission; that case was not brought forward?—We did not hold a sitting at West Ham; but the West Ham member attended at the Tottenham inquiry, and I had a return from the surveyor of West Ham. I knew West Ham so intimately that I did not drag my brother commissioners there to go over the ground.

1040. You do know the exact spot?—I do know it, because I devised the works, and carried them out.

1041. With that knowledge before you, do you think there would be any difficulty in Mr. Cook draining into the West Ham sewer?—None whatever. I think the sewer at that point is low enough. It was a question between Mr. Cook and the West Ham Local Board, whether they would take him, and on what terms.

1042. But, subject to the arrangement of that question, no physical difficulty exists?—None whatever.

1043. My friend has obtained from you the fact that they are without any statutory prohibition against discharging their sewage into the river; if that were so, would not that present the greater necessity for putting them under some legislative enactment?—I think it would; but I very much doubt their having an exemption.

1044. You are conversant with the process of the manufacture of soap; would there be any difficulty in providing a subsident tank, so as to get rid of all the solid impurities?—None whatever, in my opinion; but that is a chemical question. The process of manufacture in this country is now in that transitional state that the manufacturers are finding their way gradually out of their difficulties with regard to the conversion of that which is a nuisance into a profit. It is going on all over the country. For instance, gas, in its manufacture, was one of the greatest nuisances possible; but gas can be made in perpetuity without turning anything into the river. Then, again, with regard to the woollen manufactures, the pollution of the rivers in Yorkshire and the woollen districts was most fearful from the soap refuse, which was a great purifier. At this moment there is not less than 100,000 *l.* per annum returned into the pockets of the Yorkshire manufacturers by the deposition of soap and oil refuse; and we have had it in evidence that they may at least, by carrying the process further, put another 100,000 *l.* per annum into their pockets.

1045. And without calling in aid any profit to be received, are you of opinion that, as matters now exist, there would be any difficulty in so far purifying the works carried on at this soap manufactory, as to render the discharge of the refuse into the river a nuisance or not?—No; they can either utilise it upon their own premises, if they prefer it, or drain into the West Ham sewer.

1046. Are you aware that there have been frequent complaints made against the proprietors of these works on the part of the press, on account of their interference with the navigation?—I do not know that.

1047. Do you see any necessity for making Messrs. Cook's soap works an exceptional case?—No; on the contrary, I would make no exception there.

1048. Now I will ask you a question with regard to Luton. At present you have had evidence before you that they spend 700 *l.* a year in the process of purification which they now adopt; if they were, instead of that, to adopt the plan which you suggest, would that involve a saving, or an additional expense?—

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They might dispense with the greatest proportion of the present cost. They would very probably continue to abstract the solids before irrigation, and those solids would probably be taken away, and would almost pay the cost of their abstraction without liming. They would take the solids out without liming. The liming, which is the greatest cost, is not only not beneficial, but it injures the sewage as manure.

1049. *Chairman.*] Probably it would be much better to put in this lime?—It would. But where irrigation is about to be carried on it is necessary to make a sort of canal cut, and to take the solids out, because those solids and flocculent matter entangle with the grass on the margins of the carriers and purify, and it is that purification which arises in a given district for irrigation. The land has been said to stink, and the irrigation has been said to cause a nuisance; but it has been an improper mode of irrigation, not necessarily irrigation.

1050. Then, so far as we have gone at present, Luton would save considerably by adopting this process?—I am satisfied they would save; and I believe they would put something into their pockets.

1051. Would there be any difficulty in procuring land in that neighbourhood, for the purpose of irrigation?—I should imagine not, if they were prepared to pay a premium on the present agricultural rental; Englishmen generally are willing to take as much money as they can get; they can afford to pay a very much larger rental than if it were taken for purely agricultural processes.

1052. In that particular district, there would be of course much less difficulty in procuring land lower down?—Most unquestionably; the land is not used for building purposes, the same as it is in the neighbourhood of Tottenham and West Ham.

1053. With reference to the standard of purity, my friend (as I gather from the course of his examination) wished that still more exclusive power should be given to the Board; would you be prepared to recommend that there should be some competent authority to decide what should be sufficient, and what should not?—I say it would be absolutely necessary, and that it would be better effected by the appointment of an individual than by going through the process of an indictment, and taking a great deal of evidence; it should be subject to the appointment of some recognised individual of known celebrity, and whose opinion would be above impeachment.

1054. You gave some evidence as to the amount of sewage per acre; have you directed your attention to the danger possibly arising from fouling land from excess of sewage being put upon it?—Yes, that question has been brought before us; it is constantly reiterated that if you go on irrigating seed land, you turn it into a swamp; wherever that charge is brought against irrigation, I have no hesitation in saying that the process has been carried on in a coarse and improper manner; you could irrigate land continuously, without turning it into a swamp; putting from 6,000 to 12,000 tons per acre per annum on each 100 tons of soil, represents one inch in depth; that looks like an enormous volume, because if you put 6,000 tons on an acre, that in a year amounts to 60 inches in depth plus the rainfall; but then consider how you put it on, and consider also, that in properly irrigated land it must not remain on; that is the first necessity; it must pass as continuously over and as continuously off as it has passed on; about six-sevenths of the entire volume that is put on, will pass off by gauge; for instance, if you put 6,000 tons upon the land when it has done its work of irrigation, after being put two or three times over it, six-sevenths of it will pass off by the outlet and conduit at the bottom; therefore the charge that is made of swamping the land falls to the ground. To make it a swamp, there would be no outlet carriers, you would be obliged to have your land waterlogged as all swamps are, and undrained, and that all matter thrown upon it should fester on the land; with regard to the length of time it has been proved, there is land under irrigation at Edinburgh which has been continuously irrigated for 200 years.

1055. I presume that would not be under your system?—It was irrigated originally by the foul byrne coming down from Edinburgh; the farmers obtained a right to pour it over the land. It was stated that that process had been carried on over the land for 200 years.

1056. Do you apprehend any danger to this district from fouling the land by excess of sewage?—No, I do not, if proper judgment is used. You must not have foul open carriers, and you must not pass foul flocculent and corrupt sewage.

sewage. For instance, if a town that has many cesspools, and only discharges its corrupted matter into cesspools, were not to irrigate with it, I have no hesitation in saying that there would be a very great stench for the time being. But with a properly sewered town, with a properly arranged system of irrigation, that must go on simultaneously from the town to the land, while the sewage is fresh bkfore fermentation sets in, and you have no corrupt matter to deal with. The land, which is a great purifier of everything of that description, takes it in, and produces enormous crops. For instance, you think you have a good crop of hay if you get one and a-half tons per acre, but if you irrigate the land you get from six to seven tons per acre, and if you cut the grass green you get from 50 to 60 or 70 tons per acre, according to the season, the quality of the soil, and the intelligence with which it is manipulated. The first crop taken off that soil was 25 tons per statute acre. That was Italian rye grass.

1057. Now, one word with regard to the plan which you suggested for the individual houses and villages as to earth-closets. Are you aware that there is a company established which provides all that apparatus?—There is a company which is carrying on its operations very extensively. I know it is dealing very largely with the War Office, because I am a member at this moment of the Barrack and Hospital Commission. The company is entering into contracts with the War Office for dealing with the barracks of Brighton, Preston, and other towns. They are also prepared to enter into arrangements with villages, and even with private gentlemen. Therefore, so far as that goes, if the company can keep on its legs, and can earn a profit, we may rest quite satisfied that it will go on.

1058. Can you give the Committee any information as to their terms?—No, I cannot. I can only say that they are most confident as to the beneficial results to themselves and to the community.

1059. Sir *George Bowyer.*] Do you consider that the earth-closet system is applicable to large towns?—I think not; neither would I have it in my house, because of the secondary intervention.

1060. *Chairman.*] We need not go into this, because it is all before us. Of course it is very unpleasant to have a company coming into your house, but where it is connected with a garden and in the open air from behind, then you do not see any objection whatever?—None whatever; if the village cannot pay the expense of sewerage, it will put itself under an arrangement to have its refuse taken away. The sewage and green grass is not beneficial for either feeding or dairy purposes. I hold in my hand the Third Report of the Royal Commission appointed to inquire into the application of sewage for agricultural purposes, of which I was a member. It is stated in that Report, that hundreds of experiments were made and applied to the milk, and that the milk is better, and that the butter is better at all times of the year; it will keep better, and the cows give a larger proportion of milk and a larger make of butter.

1061. Sir *George Bowyer.*] Then you think it is applicable to feeding purposes?—It is. You cannot fatten bullocks on green grass, neither can you continue milking cows exclusively on it. Mr. Laws shows that, just as you cannot keep a regiment on beef steaks, you must vary the food: you must give them oilcake and other things, but the great proportion of their food is grass.

1062. *Chairman.*] At all events it is an element?—A very heavy element.

1063. Mr. *Wilkinson.*] With the experience which you have had, do you think it would be any hardship to that district to be treated with regard to their sewage in the way you propose to treat the district of the watershed of the Lee?—No, it is the only remedy for preventing the pollution of that mass of water.

Mr. *Wilkinson.*] I now propose, on behalf of the promoters, to call Professor Way, in order to confirm Mr. Rawlinson.

Chairman.] We do not want to have these facts proved over again. We had better hear the learned Counsel who object to these clauses.

1064. Mr. *Alderman Lawrence.*] I believe you are conversant with the River Lee throughout its course as to the various sewage nuisances that flow into it?—Yes.

1065. Can you describe in what way the overflow of the general system of drainage discharges itself into the River Lee?—I do not know the position of the overflows of the main drainage. I believe there are such overflows, but I do not know where they are.

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1066. Are you aware that the overflow of the main drainage, through a large amount of storm water coming down, discharges itself into the River Lee?—I believe it does, but I do not know at what point.

Mr. *Cripps.*] I shall have to give the Committee specific evidence on that point.

1067. Mr. *Alderman Lawrence.*] Are you aware that this overflow overflows at the tidal part of the river, or above the tidal lock?—No, I am not aware of that.

1068. Then you are not aware either as to the amount of the overflow of the main drainage sewage, whether it has ever overflowed or is likely to overflow?—No, I am not.

1069. If it did overflow, what would probably be the scour of the sewage into the Lee from the main drainage system?—I do not know the position of the overflows or anything connected with them. I only know by repute that there are such overflows, and I can imagine what would be their effect.

1070. Then you are conversant with all the other systems of drainage which discharge themselves into the Lee with the exception of the main drainage system of the metropolis?—We paid more special attention to those that were above the intakes of the two water companies; we did not consider that we were called upon to meddle with the tidal portion below the intake of the water companies.

Mr. *Wilkinson* stated that that was all the evidence he proposed to call in support of the clauses.

Mr. *Sargood,* on behalf of the town of Luton, then called the following witnesses:—

Mr. *George Bailey,* called in; Examined by Mr. *Sargood.*

Mr. G. Bailey.

1071. You are a Solicitor, practising at Luton, I believe?—Yes.

1072. Are you clerk to the Luton Board of Health?—Yes.

1073. When was that board of health established?—In August 1850, or thereabouts

1074. Prior to that had the town of Luton, from time immemorial, drained their sewage direct into the River Lee?—They had done so.

1075. When the Board of Health came into operation did they continue to use the river for that purpose, considering that they were justified in doing so?—They continued to use it, and it had been used in that way, I should say, 60 years previously, and to my recollection, I should say, 40 years, or nearly that.

1076. I believe in 1855 an application by Bill was made to the Court of Chancery for an injunction to restrain that process?—An application was made by suit at the relation of John Shaw Leigh, who was then the lord of the manor, and who is now the lord of the manor, the Attorney General being the plaintiff, and the result of that suit was an injunction upon certain terms.

1077. I believe that, pending that suit, you instituted your present mode of clarifying the sewage; you began your works, and so forth?—We began at the moment we were threatened with the Bill, and had considered a scheme previously to the Bill being filed.

1078. I believe the decree was absolutely not made until some two or three years after the Bill had been filed?—The decree was made in the year 1857, two years after the Bill was filed.

1079. *Chairman.*] What is the date of the injunction?—The 12th April 1858.

1080. Mr. *Sargood.*] I hold a copy in my hand of the injunction, and I will just read the operative parts for the information of the Committee. "We therefore, in consideration of the premises, do hereby strictly enjoin, and perpetually restrain you the township of Luton Local Board of Health, under the penalty of 2,000*l.*, to be levied upon your lands, goods and chattels to our use, from causing or permitting the sewage water or matter flowing from any sewers or drains, whether already made or opened, or hereafter to be made or opened, within the district of the said Board, to flow mediately or immediately into the River Lee, excepting such sewage water or matter as shall have been previously subjected to the process of purification known as Higgs's process, entitled in the letters patent thereof, "the means of collecting the contents of sewers and drains in cities, towns,

towns, and villages, and for applying the same for agricultural and other useful purposes," for the purpose of which process of purification you, the defendants, have erected certain works, and which have been since the filing of the Bill in this cause completed, or which shall have been subjected to any further improvement of such process which the inventor or patentee, or his assigns, may devise." The suit being instituted in 1855, the works being immediately established, the injunction was not made until it was possible to get them into operation. (*To the Witness*). At what cost had the town of Luton established those works?—The cost of the deodorising works, the purchase of the land, and the intercepting sewer, which was laid down under the direction of Mr. Bazalgette, the eminent engineer, and Mr. Page, also an eminent engineer, I should say, within a trifle, would be about 14,000*l.*, but that would not comprehend the whole of the sewers of the town, which probably have cost, I should think, about 30,000*l.*

1081. But, however, you have added to your outlay some 14,000 *l.* or 15,000 *l.* in carrying out this new process?—Yes.

1082. What is your annual expenditure in keeping it up?—The annual expenditure for the year ending March 1868, is 590 *l.* 10 *s.* 2 *d.*, and from that would have to be deducted probably about 90 *l.*, from the sale of the solid manure extracted from the sewage.

1083. At any rate, your present system, whatever another might be, is not a profit to you?—It is a very serious loss.

1084. You discharge your effluent water, I think, into some backwater of a mill?—It goes first through a large pipe, but that is almost pure water, and then it descends into the river by means of that pipe.

1085. From your knowledge of the river personally, can you speak as to what state the water is in after the discharge of your effluent water into the river?—Yes, many hundreds of times I have seen at the outfall small fish. The other day I went to Newman End, in the parish of Luton, about two and a-half miles from the works. I drank of the water, and it appeared to be really good river water. A little further on we found that 14 houses used the water for making tea, and all manner of domestic purposes.

1086. Have there been any complaints against you, either public or private, since the adoption of the new process?—I am not aware of anything further than that Mr. Leigh wished us to keep up to the injunction, and we have had no suit since.

1087. You are willing, of course, to keep up to that?—Certainly; we have paid every attention, and have expended large sums of money for that purpose.

1088. You have had occasion, on behalf of your board, to look at the Bill?—Yes.

1089. Do you think that the scheme which it proposes, coming peremptorily and stopping your sewage, if they fancy it is offensive, is a fair and reasonable thing to suggest, as against your town?—I certainly think it is most unfair; because the difficulties in our way are immense. We lie in a valley, and we should be obliged to pump the sewage up, according to Mr. Rawlinson's account, out of the valley to the summit of those hills.

1090. You are on a great slope?—Yes; I should say that to pump it up to that height would be 200 feet, and the soil is pure chalk.

1091. With regard to the town itself, I believe it is not a rich town?—It is a very poor town. The town has suffered from a very serious depreciation of trade for the last three years.

1092. Straw hats are not in the ascendant?—No.

1093. *Chairman.*] What is its rateable value?—48,500 *l.*

1094. On what population?—The population within the township is now 19,000, or thereabouts.

1095. Mr. *Sargood.*] Does the whole of the sewage of the town go through your process?—The whole of the sewage of the township.

1096. I ask you that question in consequence of a suggestion made by one of the witnesses on behalf of the promoters?—I can only say that there is not a place in the town which does not contain a main sewer or drain. If a street or alley is small, there is a proper drain laid down according to a well-developed plan. The whole of the streets are sewered.

1097. Then it is a mistake to suppose that two-thirds of the town are not availing themselves of this process?—Quite so.

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Cross-examined by Mr. *Wilkinson.*

1098. I think you gave evidence, did you not, before the Pollution of Rivers Commission?—Yes.

1099. They went down to Luton?—Yes.

1100. That, of course, was subsequent to the period at which this process of purification, to which you are bound by the injunction of the Court of Chancery, has been in operation?—Only last year.

1101. It had been in operation for some years?—Yes.

1102. I see you state, in your evidence, the circumstances attending that injunction?—Yes.

1103. That compelled you to adopt the system of purification which was patented by Mr. Higgs?—Yes.

1104. Are you aware that that system has turned out a failure, and that it does not in fact purify water?—I am not aware of it.

1105. Are you not aware that the Commissioners themselves reported upon it as quite insufficient, and incapable of effecting that which it was proposed to effect?—I am not; I have not read all their Report.

1106. I should think if they recommended that it was sufficient, you would not agree with that?—Certainly not.

1107. Of course you are not enabled to give a chemical opinion upon the point?—I go on the natural fact that fish live at the outfall, and therefore I cannot think that the water is very impure, it having to travel 50 miles further on before it gets to the New River Company.

1108. Still, although you form your judgment from that circumstance, are you prepared to state that the evidence, which I daresay you are aware, was given by other witnesses from the town, before that Commission, proves a very unsatisfactory state of things to exist?—No; I disagree with those witnesses.

1109. You think, for instance, that Mr. Thomson, who gave evidence as to typhoid fever prevailing, was wrong in attributing that to the water?—I do.

1110. I presume, in your opinion, the same remark would apply to Mr. William Willis, of Luton, who told you about the straw hat manufacture?—The evidence of those witnesses did not depend entirely upon Luton, but upon the districts outside the township, over which we have no control.

1111. Will you point out to me any part of Mr. Willis's examination, for instance, which alludes to anything beyond the immediate township of Luton?—I have not read his evidence, but I must say that I disagree with it, if it has the effect that you state.

1112. Mr. Thomson, of Luton, is a gentleman resident in Luton, and he speaks of Luton specially and particularly?—Yes.

1113. Then I observe, that evidence was given before the Commission, by Mr. Cumberland, of Luton, who is a land surveyor?—Yes.

1114. He spoke of the value of irrigation, and advocated it before the Commissioners?—Mr. Cumberland knows nothing of irrigation; he has never seen anything of it.

1115. Is that the only objection you have to his evidence?—I have not read his evidence, but I can say that he knows nothing of irrigation.

1116. Are you aware that he recommends irrigation to the town of Luton?—I am not aware of that.

1117. Mr. Maffey, the local registrar of Luton, speaks to the frightful mortality of Luton, which he connects with the river?—I understand that the mortality is light.

1118. He mentions the death-rate as being 35 in 1,000, and stated that that was frightful; you do not agree with him in that?—I say that there are many places which are healthy which return a higher death-rate, though that may have been from exceptional circumstances, such as an epidemic.

1119. Do you know Mr. Thomas Lye, a dyer and bleacher, that makes the straw plait?—Yes.

1120. Does he live at Luton also?—Yes.

1121. Do you think that he knows anything about the effect which the water has upon the health of the town?—I should say he could have no knowledge of it, inasmuch as he lives not at all in the town, but at a place which may be considered suburban.

1122. Do you apply the same observation to Mr. Frederick Davies, who is a member of the local board?—Mr. Davies's evidence is not prejudicial; he is here. I think his evidence is favourable to the view I take. I have read his evidence.

1123. How comes it that you have read Mr. Davies's evidence, which you say is favourable, and have not read Mr. Taylor's, or Mr. Lye's, or Mr. Higgins's, or Mr. Maffey's, which is unfavourable to you?—Simply because he is a friend of mine, and therefore I read his evidence.

1124. Where did you read his evidence?—In this report.

1125. Am I to understand you to state to this Committee, that you took up this report and carefully passed over all the evidence given before the Commissioners, except that of Mr. Davies?—If I were to read all that evidence, and to study it, it would take almost a month.

1126. You omitted all the rest, and simply read the evidence of Mr. Davies?—I have not said all.

1127. You have told me so?—No; there is my own evidence, I have read that.

1128. Let me direct you to a passage in your own evidence; you say that the cost of carrying out these works now is something like 590*l.* a year, on the average?—Yes.

1129. You take credit for 90*l.* from the sale of solid manure?—Yes.

1130. How do you effect some little profit from that?—There is no profit, because there is a loss of 500*l.*

1131. Are you able to sell some of the manure?—Yes.

1132. Is there any active demand for that solid manure?—There is not an active demand.

1133. What do you obtain for it?—I really do not know. I think it is 1*s.* a load, or something like that. The surveyor will speak of that.

1134. I understood you told the Commissioners, that about 500 acres of land would receive the whole of the contents of the sewers of the town?—I should say that 250 acres would do that. I made a slight mistake there.

1135. Is it now your opinion, that 250 acres would be sufficient to receive the whole sewage of the town?—I think it would.

1136. You told the Commissioners also, that the value of agricultural land, in the valley below the town, was about 30*s.* per acre?—That was the rent paid for it.

1137. Is that still the case?—That is still the case.

1138. You told them also, that there would be a possibility of renting 150 or 200 acres?—I could not say that it actually could be obtained. But, referring to the 30*s.* per acre, that is purely agricultural land; land close to the town, that is, land which could be used for the purpose of trade, would be 5*l.* per acre, and some 4*l.* per acre.

1139. But land to be used for the purpose suggested by Mr. Rawlinson might be obtained for 30*s.* per acre?—For agricultural purposes; I do not say for this purpose.

1140. Did you hear Mr. Rawlinson's evidence, to the effect that this irrigation would increase the value of agricultural lands?—Yes.

1141. Therefore, do you suppose that there would be any difficulty in obtaining land for that purpose at the rent you have paid there?—I meant to say that 30*s.* per acre was the price of land to agriculturists or farmers. What it could be got for, for the purposes of this Act, I cannot say, because landlords might have an objection to having their lands used for irrigating purposes. I am afraid Mr. Leigh would, for instance; I am almost sure he would, because he has got a park close to it.

1142. For general purposes, we may put 30*s.* per acre as the value of the land?—For agricultural or farming purposes.

1143. One word with respect to the injunction; that was obtained by Mr. Leigh, was it not?—By Mr. Leigh and the Attorney General.

1144. In fact, you know his name was only used as the plaintiff?—It was at the relation of Mr. Leigh; I think the plaintiff was the Attorney General, as a fact.

1145. The New River Company obtained it, did they not?—I have always understood that they promoted the suit.

1145*. You know it, perhaps, by this strong fact; who paid the costs?—I

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can only say that we paid our own costs; I do not know who paid their costs; I suppose the New River Company did.

1146. Do you not know that the New River Company paid the costs?—I do not.

[The Witness withdrew.

Mr. *William David Sandoe*, called; Examined by Mr. *Sargood.*

Mr. *W. D. Sandoe.*

1147. You are the surveyor to the Local Board of Health of Luton, I believe?—I am.

1148. Have you a plan of your works for deodorising?—I have (*producing the same*).

Mr. *Sargood.*] This gentleman was examined before the Commissioners and his evidence will be found at page 50. I am not going to take the Committee all over the works, but just show what you have done in the town.

Sir *George Bowyer.*] What is your object?

Mr. *Sargood.*] To show the Committee what the town of Luton have been or are doing.

Chairman.] We have got all that very clearly before us in the evidence of Mr. Sandoe at page 50 of the Report, and the other witness whom you have just examined.

Sir *George Bowyer.*] We know that they have carried on their works at a considerable expense. Is not that sufficient for your purpose?

Mr. *Sargood.*] I do not wish to trespass on the time of the Committee needlessly.

Chairman.] There is also evidence before the Commissioners as to whether there was land below the level and above the level of your outfall. I do not think it was spoken to by this witness.

1149. Mr. *Sargood.*] I have another witness upon that particular point. (To the *Witness.*) What quantity of land are you using for these works?—I should say about three and a half acres we have now in use.

1150. In what position between you and the river tributaries are they situated?—The level of the water in the beds is on a level with the leve of the river.

1151. Would that be naturally suited for the purposes of irrigation?—That might be brought into use probably with some difficulty.

1152. *Chairman.*] You have a pump?—Yes.

1153. Mr. *Sargood.*] Are they in a situation high enough to do it?—No, certainly not.

1154. Are they suited for irrigation, having regard to their level in reference to the river?—It would be required to pump from them.

1155. Is there any land which would be suitable for the purposes of irrigation, which you could get at a moderate price?—It would be a very great question whether we could get land or not.

1156. *Chairman.*] Have you tried?—I do not know that the question has been put at present; we have endeavoured to get land for the purpose of these works, and have been unable to obtain it.

1157 Sir *George Bowyer.*] Have you tried to get land for irrigation?—I believe the Board has not done so.

1158. Mr. *Sargood.*] You have found difficulty in getting land for extending your own works?—We have.

1159. You are endeavouring to escape from irrigation, and therefore you have not made any effort about it?—That is the case; there is nothing perhaps in the works beyond this, that we have enormously large depositing beds, larger than any other works that I am aware of, about 120 feet by 90 feet.

1160. *Chairman.*] After that you use your pump to discharge water into the river?—No, the water flows off into the natural stream about a quarter of a mile from our works; it has a separate outfall.

1161. What

1161. What do you use the pump for?—Simply for the purpose of lifting the sewage about 15 feet high; the solid sewage only. Mr. *W. D. Sandoe.*

1162. Mr. *Sargood.*] You pass nothing whatever into the river but the water?—Nothing whatever. 30 April 1868.

Cross-examined by Mr. *Davison.*

1163. You are the Inspector of Nuisances, are you not?—Yes.

1164. There are considerable nuisances at Luton?—I am not aware of that.

Chairman We have evidence with regard to the nuisances in the Report.

Mr. *Davison.*] I have it here at page 57.

Chairman.] We do not want to go into that again.

1165. Mr. *Davison.*] Typhoid fever is the result of those nuisances, is it not?—I am not aware of that fact.

1166. Now, about the lie of the land at Luton; as I understand, you would have to pump the sewage before you could use it for irrigation purposes?—Certainly.

1167. Have you made any calculation of what the cost of that would be?—I have not.

1168. Has Mr. Rawlinson told you what it would cost to lift it, say 50 feet?—I heard Mr. Rawlinson give his evidence this morning.

1169. Has he not told you personally, or told the Local Board that?—Yes.

1170. You have no reason to doubt that he is accurate in what he stated?—He may be accurate.

1171. How many feet should you have to lift it in order to get rid of the total quantity of your sewage?—From 100 to 200 feet.

1172. That would satisfy the whole of the sewage which you have?—I cannot say as to the whole of it.

1173. *Chairman.*] Do you know how many acres there would be with a contour line of 50 feet above the bed of the river?—A small quantity; the land is very irregular.

1174. How many acres within 100 feet?—Fifty or sixty, not more than that.

1175. About Luton?—Not near the town; a mile and a half from the town.

1176. Mr. *Davison.*] You cannot tell how many acres there would be within a contour line of 100 feet?—There might be 50 or 60.

Mr. *Sargood.*] The next witness is a builder, and he will speak to that.

1177. Mr. *Davison.*] If you take your sewage a mile or two down the river, should you not be able to get any quantity of land you wanted?—Not without pumping.

1178. At present you simply lime it?—We lime and filter it.

1179. Did you filter when Mr. Rawlinson was at Luton?—Yes.

1180. Is it not what you call a lime deposit?—Yes, and filter as well.

1181. What do you filter through?—Through stone, charcoal, and gravel.

1182. Did you do that when Mr. Rawlinson was at Luton?—Yes.

1183. Did he see it?—I believe he did.

1184. Did you point it out to him?—I pointed out to him where the water passed off.

[The Witness withdrew.

Mr. *Evan Owen Williams,* called; Examined by Mr. *Sargood.*

1185. You are a Builder and Contractor, at Luton, I believe?—Yes. Mr. *E. O. Williams.*

1186. You happen to be Chairman of the Local Board of Health?—I do.

1187. Have you examined into the provisions of this Bill?—I have looked them over.

1188. Do you think the powers such as are proposed to be given to the Conservators are the best scheme for promoting the purity of the towns and rivers that could be devised?—I think in our case, that having adopted the best means that we could find for deodorising our sewage, at a great expense, we ought not to be called upon to incur any outlay without some assistance in some form or other.

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1189. You, being a builder, can speak to the land in the neighbourhood?—Yes, I can.

1190. Is there land that would be available for the purpose of irrigation, supposing you had the means of incurring the outlay?—The valley through which the river runs is a narrow bog; in no place is the bog land wider than 50 or 60 yards, and then the hills rise on the right hand and on the left, with chalk and a deposit of clay and ragstone on the top. That rises out at a very quick rate on either side. I do not know a local spot, except 50 acres, at a lower level than 50 or 60 feet above the level of our sewage. I was through it this morning.

1191. *Chairman.*] How far down the river?—A little place about a mile to the left.

1192. And below that?—Below that the valley converges. It is very narrow on the right hand side of Mr. Leigh's park; on the left the hills rise very suddenly, right away for seven miles.

1193. Mr. *Sargood.*] I believe Mr. Leigh, who is a large landed proprietor, is your immediate neighbour in the town?—His land comes up to our works.

1194. Have you any idea whether he would prefer to let you have some land for irrigation, rather than that you should adopt the proposed scheme?—I cannot say what Mr. Leigh might do; I do not think we could possibly irrigate land in our own neighbourhood advantageously.

1195. From the nature of the soil?—From the nature of the soil, and the expense it would be to raise the sewage matter.

1196. You are also acquainted with the poverty of your town; do you believe that the town has the means of raising sufficient capital to institute new works for irrigation?—It is not in a position to do that at the present time.

1197. Supposing the conservators chose to take the sewage out of your hands and deal with it themselves, you would not object to that?—We should not object to it. I should like to correct one point in the evidence that I have heard upon the matter respecting the sewage of our town. It has been said that one-third of it does not come down to our works at all. It is entirely an error. Only one-sixth, I should say, of the excretion of the town really comes down to works through the drain, but the remaining five-sixths is brought by night-soil carts down to the works, and then mixed with solids which are deposited in our beds. We mix it with the soil, and then sell it to the farmers in the neighbourhood. We really bring the whole of the sewage out of the town, and no waterworks that could be made would bring more sewage to our works than we now get.

1198. *Chairman.*] We have it in evidence that there are about 3,000 houses which have privies?—That is a mistake. We do not allow a single cottage to be built without having a spot in the rear containing, on the average, a cube yard, and we keep a staff of night-soil carts and men to empty these places regularly, and mix the deposit at the beds.

1199. Can you tell us how many houses drain into the sewer?—My impression is that not more than one-sixth do, and the contents of the cesspools of the other five-sixths we convey by carts to our works.

1200. Sir *George Bowyer.*] You object to be put to the expense of new works?—We do.

1201. If you had new works, you would have to set off against the expense the annual cost of your present works, which are carried on at a considerable expense?—500 *l.* a year, perhaps. It may cost 450 *l.* a year after selling the sewage.

1202. Then you would save 400 *l.* a year by adopting a different system?—If that different system did not cost us more money.

1203. Assuming that system did not cost you anything in the way of annual outlay, and that it was merely a sum of money spent once for all in the way Mr. Rawlinson has told us, who said that, by depositing sewage irrigation, it will be spent once for all. Instead of there being an annual outlay, you will get a profit?—That is, supposing sewage matter could be taken by natural gravitation down the valley, which I contend it could not.

1204. Supposing that the sewage system could be carried on at present, you would have the profit of the sewage irrigation, and you would also have a saving of 400 *l.* a year, which is about the clear balance against you, accruing from your carrying on your works?—I quite see your point. I contend it would cost more to raise that sewage up to a level of soil sufficient in area for us to irrigate than

than would absorb the additional profit that would be gained by improving the land.

1205. Is that your opinion?—Yes.

1206. Have you heard the evidence Mr. Rawlinson gave?—I have.

1207. He has given evidence that the expense of raising sewage by pumping is not so great as you appear to consider?—It would cost us 3 *l.* a day to raise our sewage up to the height of 50 feet.

1208. You do not agree with Mr. Rawlinson?—It is a matter of opinion. I have gone into a little calculation on the matter.

1209. How high do you think you would have to raise your sewage?—I do not think we could do it advantageously at less than 100 feet. We should do it better at 170 feet, for that is about the range of the height of the hills on the left bank of the river.

1210. Mr. Rawlinson has told us exactly what it would cost to raise the greatest amount of sewage 100 feet. Mr. Rawlinson has said that it would cost 16 *s.* per acre to raise 6,000 tons 50 feet; you would have to raise it how much?—It would cost considerably more than the ratio of three times the amount. The cost of raising it 150 feet would be more than three times the cost of raising it 50 feet.

1211. I thought you said you would have to raise it 100 feet?—It would cost considerably more than 32 *s.* to raise it 100 feet.

Mr. *Sargood.*] I do not think that Mr. Rawlinson exactly negatived that proposition. He said he would allow three times that to raise it 150 feet.

The *Witness.*] Mr. Rawlinson said double. I am of opinion that it would be considerably more.

Sir *George Bowyer* (to Mr. *Rawlinson*).] If it cost 16 *s.* to raise the sewage 50 feet, it would cost double that amount to raise it 100 feet. That is to say that the total would be twice 16 *s.*

Mr. *Rawlinson.*] The cost of raising it 100 feet would be double 32 *s.*

1212. Sir *George Bowyer* (to the *Witness*)]. I understood you to say that the second 50 feet would cost twice as much as the first 50 feet?—I said I thought it would cost much more in proportion.

Mr. *Rawlinson.*] It would be rather less because the plans would be on the ground.

1213. Sir *George Bowyer.*] Then it would cost 32 *s.* to raise it 100 feet?—I find we should have to raise something like 450,000 gallons per day.

1214. *Chairman.*] Could you find land to irrigate at a contour line of 100 feet above the outfall of your sewage at an elevation of 100 feet?—Within a mile of the works the land that is possible to be got (I speak roundly when I say possible, because I do not know whether the landowners would be willing to part with it or whether we should be obliged to take compulsory powers), I say at an elevation of 100 feet above the level of our works, we might secure from 100 to 200 acres. I do not know whether we could get more than 150 acres.

1215. Sir *George Bowyer.*] How do you know you cannot get the land, if you have never tried?—I am over the ground every day in my life.

1216. Mr. *Sargood.*] Your great objection is to be saddled with any additional expense?—That is the feeling of the town. The town is poor, and unless the Committee should think that the present process really must be prohibited, the town is too poor to be saddled with the additional expense of an irrigating scheme. We not only think we are too poor to be saddled with that additional expense, but we think we should be called upon, every now and then, to decide the question of what is offensive and injurious according to the words of the Bill. We should like to have something inserted in that Bill which should define the amount of impurity which would be permitted.

1217. Mr. *Powell.*] You wish for words defining that point?—Yes.

1218. Mr. *Sargood.*] You would like, probably, to see some established authority that would save litigation?—We should prefer it very much. We have not the slightest objection to the Conservancy Board; we would rather be under that body than nobody.

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1219. Mr. *Wilkinson.*] You did not give evidence before the Rivers Commission?—I did not.

1220. Mr. *Powell.*] How do you discharge your sewage into the river?—By one outlet, three feet wide by six inches. It runs into the backwater of a mill belonging to Mr. Leigh, and then the backwater runs into the mill tail, about a quarter of a mile further on.

1221. That is outside the town?—Quite the outside of the town. The extreme east end of the town.

1222. *Chairman.*] What is the length of main outfall from the town to the tanks?—Our own culvert is about a furlong, and it is another furlong to the backwater of the mill.

1223. Is there land between?—It is entirely bog land; it is merely for the cattle to run on for the mill. The hill rises on the left hand immediately.

1224. Do you mean that it is undrained land?—It is a peat deposit on the chalk subsoil, through the water having been dammed up, throwing the vegetation back.

1225. Mr. *Sargood.*] I suppose you have rushes growing there?—It is principally dead solid bog and peat deposit, which has gathered for centuries, through the hills damming up the water and preventing the growth of vegetation.

Cross-examined by Mr. *Wilkinson.*

1226. Do I understand you to state that the land you spoke of is old bog?—Down the valley, entirely so.

1227. That is not the character of the land in your district?—As I said just now, the peat bog is 50 yards wide on the average where the main carrier is, and the chalk hills rise on either side almost immediately.

1228. Do you mean that there is a peat bog allowed to remain as a peat bog for many years in such a county as yours?—That is so; that is all I can say.

1229. That is not very creditable to the agricultural enterprise?—They cannot take it away.

1230. They might drain it, might they not?—No; there is no natural fall.

1231. You know generally the basin of the Lee, do you not?—I do, thoroughly well.

1232. Generally speaking, there is a great facility for draining by gravitation, is there not?—But the mills are, on the average, every mile, and when you consider that the water is pent up eight or ten feet at every one of these mills, you may naturally suppose that there are no means of getting the water off between them from one to the other.

1233. I understood you to state that the mills create an obstruction; but with that exception there would be facilities for gravitation?—I cannot say anything about mill property.

1234. I ask you the question, because the Commissioners in their report, state distinctly that generally throughout, the Lee sewage can be applied to the land without difficulty by gravitation?—Individually, I am of opinion that the corn mills on the rivers throughout the country, have been a serious injury to the rivers.

1235. Excepting that particular obstruction to which you have alluded, do you agree with the Commissioners that generally throughout the Lee basin, sewage may be applied without difficulty by gravitation?—If there was land to put it on.

Chairman.] We are only now on this particular case, whether there is any land between Luton to be irrigated, and the witness insists that the only land is that which forms Mr. Leigh's park.

The *Witness.*] The ground rises too quickly in Mr. Leigh's park, for us to do anything with that; the only tract of land available for that purpose, is a piece called Blackwater Common to the left hand of the river; that I say is at a level of 50 feet above the river, and is something like 50 acres; if we raise it 100 feet we go absolutely over the slope of the hills, and get 100 or 200 acres of land at that level.

1236. Mr. *Powell.*] What is the level of the highest ground about Luton?—200 feet above the level of the river.

1237. Mr.

1237. Mr. *Wise.*] Is this common the whole of the ground which you are talking of?—The whole of it is cultivated; it is chalk, covered with a deposit of red clay and sandstone.

1238. Mr. *Wilkinson.*] You are not now speaking of the bog land?—The bog land, which is only about 50 yards wide, is along the centre of the valley.

1239. Do I understand you, that Mr. Leigh's land is the only land which can be made available?—Exactly so, if you consider that to be Mr. Leigh's land; part of it is Mr. Leigh's, and part of it is Mr. Crawley's.

1240. Are we to understand that, in that district, there is no other land that can be bought?—Not without raising it to a considerable height further. There is no land in our neighbourhood, within five miles, that we could spread our sewage on, unless we raised it 200 feet, nor do I know any all the way along the valley of the Lee, for it rises suddenly on the right hand side.

1241. Mr. *Sheridan.*] Except the 200 acres, to which you refer, it is Mr. Leigh's property?—Part of it, and part of it is Mr. Crawley's.

1242. Mr. *Wilkinson.*] Would there be any difficulty in renting that?—I cannot say.

1243. Would not Mr. Leigh be very good to receive, either in the way of rent or purchase money, more for his land?—I should not like to commit myself to what price he would require for it.

1244. Mr. *Sheridan.*] You know what the present value per acre is?—I know what the present value per acre is; I know that the price that would be required for it would not be remunerative for agricultural purposes. We should get no return for agricultural purposes. I have an impression that he would ask a very extravagant price for the land. I think the simple interest of the money would take up a considerable portion of the additional profits that would be made by the irrigation process.

1245. Sir *George Bowyer.*] What reason have you to suppose that Mr. Leigh would do anything so foolish as that?—He would not be foolish to get the best price he could for his property.

1246. He would be very foolish if he asked a price which prevented the improvement of his property?—It would not be his property if we bought it of him.

1247. You may rent it of him, under the Sewage Utilisation Act; how can you know what he would ask for his land, if you have not asked him?—We know what Mr. Crawley has asked for our own local purposes at the other end.

1248. *Chairman.*] What has he asked?—Two hundred and fifty pounds an acre.

1249. Is that townland?—No; we pay him from 800*l.* to 1,200*l.* an acre for the townland.

1250. Sir *George Bowyer.*] You mean the purchase of it?—Yes.

1251. The Sewage Utilisation Act enables you to rent as well as to purchase. Have you ascertained at what rent you can get the land?—We have not.

1252. Mr. *Wilkinson.*] Your only criterion of what Mr. Leigh would ask, is what Mr. Crawley has asked for it?—I think Mr. Leigh gave a very heavy sum for this land.

1253. You do not mean to say that Mr. Leigh would be indisposed to allow his land to be rented for or bought for a purpose which would improve the rest of his estate?—I do not think that the irrigation of this portion of the land which we should buy or rent would improve the rest of his estate in any way.

1254. Sir *George Bowyer.*] It would improve his property?—I am led to understand so from the remarks of Mr. Rawlinson, but I was not aware of that.

1255. Do you not think that Mr. Leigh, or other landowners, would be very glad to get an increase of rent for letting the land to you for sewage irrigation purposes?—I cannot answer that question, because I do not know Mr. Leigh's mind upon the subject.

1256. Why have you not ascertained it?—Because we have not been called upon to do so. We wanted to buy a piece beyond, but we had great difficulty in obtaining it from Mr. Leigh.

1257. Mr. *Wilkinson.*] You have given the Committee some information as

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to the present cost of the works; what is the total cost of the works?—The cost of the works we reckon at 500 *l.* a year.

1258. When you say reckon, what do you mean by that, have you any accounts to produce?—Yes; I am speaking in round numbers. Mr. Barry said 592 *l.*; I was not aware it was 592 *l.* That is reduced by the sewage that we sell.

1259. Can you give me the amount which your cartage costs you?—

Mr. *Sargood.*] The last witness would have done that, but the Chairman said it was not required.

The *Witness.*] We should wish to turn the water into the river as clean as we possibly can. We should like to have some standard to do it by. We do not think we should be called upon for any increased expenses, having made the outlay we have.

Re-examined by Mr. *Sargood.*

1260. I suppose you, like the last witness, put your case to the Committee rather on the ground that you are not doing any injury, than on the difficulty of doing something else?—Yes.

1261. Mr. Leigh, as a large proprietor, is not likely to be tempted by the price of a few acres of land to do that which would be an annoyance to his park?—Certainly not.

Dr. *Edward Woakes,* called; Examined by Mr. *Sargood.*

Dr. *E. Woakes.*

1262. You are a physician at Luton, I believe?—Yes.

1263. You know where these works are situated?—Yes.

1264. You know the outfall into the river, where the effluent water is allowed to run?—Yes.

1265. Have you made analysis of the river water below the point at which it comes into contact with the sewage?—I have.

1266. Speaking as a medical and scientific man, what is the state of the water at the point where you have taken it out and analysed it?—It is as free from impurity as any deodorizing process can render it.

1267. How far off have you gathered the water from the outfall of the sewer?—Three miles off.

1268. In your belief is the water, you have so gathered in such a state as to be injurious, offensive, or noxious, either to the neighbourhood, or to individuals?—I think as long as the deodorizing process which is at present followed is kept up to the proper standard, that it will be rendered as pure as it is possible to be rendered. The water is deprived of the sewage as much as it is possible to be deprived of it by any other process. I ought to have said, in order to explain it, that there are very striking peculiarities about the character of our sewage; it is intermixed with mineral ingredients, which it so happens our process of deodorization is exactly calculated to take away; the oxalic acid which is added to the sewage in very large quantities, can all of it be removed by the addition of lime; and I cannot understand how, if lime will not remove it, allowing it to filtrate through chalk can. It is proposed to pump this sewage up to a considerable height, on to the chalk hill; chalk has no effect on oxalic acid at all; it will allow oxalic acid to be filtered through, and be returned to the river as it was placed upon the land. The lime is calculated to remove the whole of the oxalic acid from it; and, if properly applied, it will do so.

1269. Having regard then to that fact, do you believe that your present system is more advantageous for producing purification than the irrigating system which has been recommended by Mr. Rawlinson, having regard to the peculiarity of the sewage of Luton?—I know little, personally, about the irrigation process; but where I have seen a report on it, I find that it has totally failed. I see that stated in this report.

1270. Sir *G. Bowyer.*] At what page?—Page 188, volume 2. Mr. Denton is giving evidence. It is question 5,654. The question is, "At present the authorities of Luton are compelled to filter the sewage of the town, and they are doing

doing it at an annual expense of many hundreds, by a series of sediment beds. The sewage is treated by lime, and is allowed to stand in open shallow reservoirs until decomposition takes place, then the effluent water runs away into the Lee, and the mud is wheeled away?" Then the answer is, "Can anything be worse than that, except the simple discharge of the sewage at once into the river. Passing from Luton, which I referred to, because I consider it is one of the difficulties in utilising the upper streams of the Lee, I will just mention another case on the Stort, showing the absolute necessity for strict supervision, and the complete interception of sewage water. I was called upon by one of the courts to inquire into the discharge of sewage from some dog-kennels belonging to the Rev. Mr. Arkwright. He was master of the Essex hounds, and his dogs were dressed with arsenic, as I believe is the custom for mange and other skin diseases. The dogs were occasionally fed with glandered meat by accident, at any rate glandered horses had found their way to those dog-kennels. This was near the Stort, some six miles above its junction with the Lee. It was found that the drippings of horse flesh when glandered, and the arsenic from the washing of the dogs, found their way into Harlow Brook, and poisoned the horses that drank out of the brook. The consequence was that Baroness North brought an action against Mr. Arkwright for the damage that her tenants had suffered, and particularly one Mr. Barnard, and the Court ruled that the practice should be discontinued; and I was called upon to see whether the discontinuance was perfect. Mr. Arkwright finding that the Court had given this order, adopted various plans of purification and filtration, and even irrigation also. Dr. Voelcker, at my instigation, accompanied me to the spot, and obtained some of the water and analysed it; although perfectly clear to the eye, and so satisfactory to all appearance, that I was very nearly drinking some of it, it was found on analysis to be as chemically impure as ever. Again, to convey to you what information I possess, with regard to another tributary of the Lee, viz. the Mimram, I may state that I have just devised a scheme for draining the small town of Welwyn; and there is no mode that I can see of dealing with the sewage, except by filtration, and discharging it into the river lower down, the difficulty being that it is not a town sufficiently large to warrant any expensive works, and the consequence is that, without some very rigid rules as to the interception of the sewage, and conveying it down to a distance, where it could be used for irrigation, I at present see no means of carrying out that drainage satisfactorily.

1271. *Chairman.*] How does that make out your view that irrigation has totally failed?—Because there is an admixture of chemicals in this case at the Stort, and the chemist was allowed to analyse the water as it was returned from the land, and though it appeared pure and perfectly drinkable to the naked eye, it was found on analysis to be as chemically impure as ever it was before the process of irrigation.

1272. Mr. *Benyon.*] That is to say, that irrigation does not remove chemical impurities?—So it states here; I have no personal information on the subject beyond that.

1273. Mr. *Sargood.*] I may ask you one general question in conclusion; do you know the distance of the company's water take from your works at Luton?—What company do you refer to?

1274 The New River Company?—I do not.

1275. How far is Hertford in the course of the river?—I do not know.

1276. Somebody has told us that it is 21 or 22 miles; do you believe it possible, after the process of purification that your sewage water has undergone, that there should be any deleterious effect at a distance of 15 or 20 miles off?—I do not.

1277. Sir *G. Bowyer.*] This answer does not bear out your statement, that the sewage irrigation has totally failed?—I do not refer to organic impurities, but simply inorganic chemical impurities, such as arsenic.

1278. *Chairman.*] I find this in that answer: "Mr. Arkwright finding that the Court had given this order, adopted various plans of purification and filtration, and even irrigation also; Dr. Voelcker, at my instigation, accompanied me to the spot and obtained some of the water, and analysed it; although perfectly clear to the eye and so satisfactory to all appearance, that I was very nearly drinking some of it, it was found on analysis to be as chemically impure as ever"?—"As ever" refers to a former analysis, which states that the drip-

pings "of horse flesh when glandered, and the arsenic from the washing of the dogs, found their way into Harlow Brook, and poisoned the horses that drank out of the brook."

1279. It does not say that it is water which has passed over irrigated lands?—I shall be disposed to insist most strongly on the fact that the principal impurity is oxalic acid. Lime takes the oxalic acid up, and forms an insoluble precipitate, but chalk does not do so.

1280. Sir *George Bowyer.*] But oxalic acid if very much diluted becomes innocuous?—Yes.

1281. Supposing it passed through soil, and then went to the river, mixing with a considerable volume of water, do you not think that oxalic acid, if it got to the river at all, would be rendered innocuous?—And just in the same proportion would occur the elements that are derived from the drainage.

1282. *Chairman.*] You have no personal knowledge of whether plants draw up oxalic acid or not?—The presumption is that they would not. I am not aware whether plants of the sorrel kind do.

1283. Sir *George Bowyer.*] You would not deny that vegetation would take up sewage impurities, properly so called?—Certainly not.

1284. Mr. *Sargood.*] May I take it from you generally, having regard to the sewage of Luton, and the peculiarity of the soil of Luton, that you think that purity is obtained by the present process quite as effectively as it could be by any process of irrigation?—As far as I know.

Cross-examined by Mr. *Wilkinson.*

1285. To quote the evidence of the gentleman to whom you have already referred, Mr. Bailey Denton, he was not of your opinion, because, if you refer to Question 5657, you will find that the question put to him is this:—"It is your proposition that Luton and Welwyn, and other towns and villages similarly situated, should be obliged to pump their water on to a high level, so as to purify it before it passes into the Lee." His answer is, "I mention Luton as being a town where some special mode of arrangement should be adopted." Do you agree with him in that opinion?—There is a special mode adopted.

1286. That is with this special mode before him, which has afterwards been explained by him; but he still thinks that a further special mode of pumping up to a high level should be adopted?—He expresses an extreme doubt whether the passing of water through chalk would deprive it of impurity.

1287. He says, "I do think so, but I do not speak with sufficient knowledge to be able to affirm it without some doubt?"—He expressed no doubt whatever that oxalic acid would be taken out in passing through chalk.

1288. It would be in contact with the river?—It would only be diluted; the same might be said of anything else.

1289. *Chairman.*] What are the elements of which oxalic acid is composed?—Carbon, hydrogen, and oxygen.

1290. In what proportions?—It is some time since I passed my chemical examination; I do not remember the equivalents just now.

1291. Mr. *Wilkinson.*] You came here to give chemical evidence?—I do not think that is of very great importance; it is an organic salt, which is capable of dissolution by absorption into vegetable products. I say it is all capable of being taken out of the water by the process that is adopted.

1292. That consists of putting a few grains of lime into a gallon of water, shortly stated?—A great many grains of lime.

1293. Do you compare that to putting a gallon of sewage on the quantity of land which should consume it, where the growth of grass is produced; would you compare those two operations?—If you want to grow sour grass, such as is spoken of, I think oxalic acid would be a splendid thing.

1294. I am talking of the effect of purifying by lime, and asking you with reference to those two processes; which do you think is the best method?—I have not gone into it scientifically.

1295. *Chairman.*] Will you explain with reference to the general composition of roots and plants, how far they take up the three elements of carbon, oxygen, and hydrogen, and in what proportions the elementary bodies are in oxalic acid, and how far those elements would combine with either chalk or

with

with the lime, and when they are brought together what would be the result?—The result of adding lime to a solution containing oxalic acid would be to form oxide of lime, which is an insoluble product, and therefore when it is returned to the deposit beds it falls to the bottom of those beds in conjunction with the other solid constituents, which are taken down by the lime, and therefore are removed from the water. There is a direct chemical combination between lime and oxalic acid, but there is not that direct chemical combination between oxalic acid and chalk.

1296. Do you mean there can be no combination between oxalic acid and chalk, supposing both to be mixed together with the assistance of water?—I do not mean to say there can be no combination.

1297. To what extent is there a combination?—Very slowly and very gradually the same combination would take place, but here the thing is done directly.

1298. Sir *George Bowyer.*] Is not chalk considered an anti-acid?—Yes.

1299. *Chairman.*] Do you know how long it would take to combine the two substances, oxalic acid and chalk, when they are mingled together and the chalk is pounded up?—They would combine ultimately.

1300. If the surface was very large, would the combination be instantaneous to some extent?—What I insist upon is that it is an inferior process to that which we adopt.

1301. Then your evidence would be that a combination would take effect in one case quicker than in the other?—Perfectly.

1302. With regard to the plants, are the carbon, oxygen, and hydrogen, substances that are used by plants?—Considerably so.

1303. Do you think they would not combine in any way with the diluted oxalic acid that would be presented to them?—I think it would require direct experiment to test that. The oxalic acid, if applied to the land in such quantities as it exists in our sewage, would be in too large a quantity, certainly, to be decomposed into its constituents, and would rather act as a poison to the plant.

1304. You think that the sewage would be so concentrated that it would poison the plants?—I think so. I think that, owing to that single fact, instead of our being able to derive profit from this process of irrigation as Mr. Rawlinson has represented, we should be visited with a loss.

1305. What is the proportion of oxalic acid that now exists in the sewage?—It varies very considerably.

1306. Sir *George Bowyer.*] What is the maximum?—One of the largest dyers in Luton uses about 5 cwt. of oxalic acid per annum. There are about 150 persons who add their quota.

1307. *Chairman.*] Have you tried the sewage so as to be able to say how much oxalic acid there is in a gallon?—No.

1308. Sir *George Bowyer.*] You have no data to give us for that opinion; it is a mere guess on your part?—It is not a guess, because I have had the other facts to guide me to that opinion.

1309. *Chairman.*] Can you give the Committee an idea as to the quantity of oxalic acid there is in a gallon?—It is variable.

1310. Have you taken any sort of means to ascertain it scientifically?—No.

1311. I do not wish to doubt your scientific powers, because I am only putting it to you as a matter of fact, that you have not gone into the matter scientifically?—I have not tried to ascertain the proportion of oxalic acid.

1312. Sir *George Bowyer.*] You do not know what proportion of oxalic acid there is in your sewage?—If you have the quantity that is calculated to be put in you can get an approximate idea.

1313. Have you obtained that approximate idea?—No, not further than I have stated.

1314. In the first place, you must know the quantity of oxalic acid, and then you must know the quantity of sewage; do you know, or can you state exactly, the quantity of sewage with which the oxalic acid is mixed?—No; I tell you distinctly that I can give no other information upon that point than I have stated.

1315. We want to ascertain on what data your opinion is based, because the opinion is only valuable so far as it is based upon knowledge and data; if you have not the means of ascertaining that data we shall put our own value upon

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your opinion?—I take my estimate from the proportion returned by the average of one of the bleachers.

1316. You have not told us the proportion, because it depends not on the amount of oxalic acid, but on the proportion between the volume of oxalic acid and the volume of sewage; it depends on the proportion and not on the quantity?—Exactly.

1317. Mr. *Wilkinson.*] You are giving evidence only as to the oxalic acid; is that a poisonous ingredient?—Yes.

1318. There are other ingredients as well?—Yes.

1319. With reference to the oxalic acid, is not chalk an antidote to the poison of oxalic acid?—Certainly.

1320. Is not chalk recognised as an antidote to oxalic acid?—There are two or three recognised antidotes.

1321. Sir *George Bowyer.*] I always believed that chalk was used medically as an anti-acid?—Undoubtedly.

1322. Would it not neutralise oxalic acid, as well as any other acid?—Undoubtedly; I say that lime is better qualified to take it. If lime were considered a bad process for taking it from the sewage, taking it through chalk is not a better process.

1323. Mr. *Wilkinson.*] With regard to the general question of the health of Luton; do you say now that it is in a very satisfactory state?—It is in a tolerably satisfactory state.

1324. Has it altered much since December 1866, when this inquiry took place by the Pollution of Rivers Commission?—There has been an epidemic of small-pox.

Chairman.] We need not go on with this subject any further.

1325. Mr. *Wilkinson.*] You know Mr. Thomson, of Luton, who was examined before the Rivers Commission?—I do.

1326. You are aware of the evidence he gave as to the state of health of the town?—I have read it.

1327. He said that was partly owing to atmospheric influence, but that it was chiefly owing to the quality of the water?—What is it?

1328. "What should you say, as a surgeon, was the origin of the typhoid fever"?—I quite agree that it may have arisen from defective water. I quite agree with what Mr. Thomson said before the Commissioners.

1329. Mr. *Surtees.*] I think the last witness stated that there were about 450,000 gallons of sewage at Luton, do you know anything about that?—I know that as a fact.

1330. Do not about 224 gallons make one ton?—I believe so.

1331. That would make 450,000 gallons, or about 2,000 tons of sewage, which the last witness said were to be found daily?—Yes.

1332. Now, what I want to ask you is this: what quantity of land do you think would be required for the purpose of using up these 2,000 tons of manure daily or yearly?—Mr. Rawlinson has stated, I believe, in his evidence that 25 acres are required to use the sewage of a population of about 10,000.

Mr. *Sargood* stated that he had several other witnesses, who were members of the local boards, but as he did not think that they would furnish the Committee with any new ideas, he did not think it necessary to call them.

The *Chairman* stated that the Committee had got the facts very clearly before them.

Mr. *Sargood* then proceeded to address the Committee on behalf of the town of Luton, and proposed the following clauses: "Nothing in this Act shall operate or extend to prevent the chairman and members of the township of Luton Local Board of Health for the time being, or the inhabitants of the said town, from taking and using the water of the River Lee for all purposes which may be by them deemed necessary for promoting and maintaining the health, comfort, and cleanliness of the said town of Luton and the inhabitants thereof."

"Nothing in this Act shall operate or extend to prevent the chairman and members of the Luton Board of Health, and the inhabitants of the said town

town from maintaining, continuing, and extending their present system of sewerage and drainage works in the said town, or from discharging into the said River Lee the sewage water or matter flowing from any sewers or drains after such sewage water or matter has been subjected to the process of purification known as Higgs's process; and in pursuance of the conditions enjoined upon them by the writ of injunction awarded against them by and out of the High Court of Chancery, on the day of 1858, in a suit wherein Her Majesty's then Attorney General was informant, on the relation of J. Leigh, plaintiff, and the said township of Luton Local Board of Health were defendants.

Mr. *Stanhope* then addressed the Committee on behalf of the mayor and corporation of Hertford, and stated that he would submit a clause on their behalf.

Mr. *Michael*, on behalf of the Tottenham Local Board of Health, called the following Witness.

Professor *John Thomas Way*, called in; Examined by Mr. *Michael*.

1333. You were one of the Commissioners appointed to inquire into this matter, and you examined the River Lee?—Yes.

1334. I believe the Bill is drawn under your directions?—No.

1335. I thought you were a party to the drawing of the Bill?—No; I knew nothing of the Bill until I saw it in print.

1336. You are a party to the report?—Certainly; to the report of the Commissioners.

1337. You, I believe, are aware of the circumstances connected with Tottenham?—Yes, generally.

1338. You know that they have expended large sums of money on a system of sewerage?—Yes.

1339. At the present time they are using some means for defœcating and deodorising sewage matter?—Yes.

1340. Are you aware also that they are at a very considerable distance below the intake of the water companies?—Yes.

Chairman.] You had better give evidence of the system which is adopted there.

1341. Mr. *Michael.*] I may say that the clauses which I shall venture to propose to the Committee will be *mutatis mutandis* the same clauses which have been accepted by the promoters in the West Ham case; I am not going to say we are doing sufficient, but I ask for a clause to be put into the Bill providing that when we have done the best which science may dictate to purify the sewage from any deleterious matter, that then the effluent water is to be allowed to go into the river; I am going to ask this witness, as the authority upon which that Report is based, provided the best means are adopted for filtration, defœcation, and deodorisation of the sewage, he sees no reason why the effluent water should not be allowed to run into the River Lee at the point at which our outfall occurs. (To the *Witness.*) Will you answer that question?—I believe that Tottenham might be easily permitted to discharge its sewage if it is properly clarified by known means without passing it over the land. I so stated to the promoters of this Bill, and they were wishing to have that opinion brought out.

Sir *George Bowyer.*] Of course the method adopted must be an effectual method. The Bill does not prescribe any effectual method of disposing of the sewage, but of course the method to be adopted must be effectual; and if yours is effectual, then those who use it will not come within the operation of the Bill.

1342. Mr. *Michael.*] The Bill provides that no sewage matter under any conditions shall enter into the Lee; I draw a very broad distinction between sewage matter introduced into the stream above the intake of the water companies and below, and I put to the witness whether, under those circumstances, confining it to below the intake, he considers that there would be any damage

Professor *J. T. Way.*

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arising to the River Lee from allowing sewage matter, properly defœcated and deodorised, from passing into the river?—I think that might undoubtedly be allowed. I do make that very great distinction between the towns above and below the intake. I say that the sewage can be sufficiently cleansed by known processes, under rigid superintendence, so as to render it sufficiently pure to throw it into water which is not used for domestic purposes. But I do not admit that in the case of towns where water is to be used for domestic purposes.

Mr. *Michael* then proposed the following clauses on behalf of the Local Board of Health of Tottenham :—

Provided that with respect to the sewerage works of the West Ham Local Board (in this section referred to as the Local Board) the following provisions shall have effect :—

(1.) The Conservancy Board shall not, within two years from the passing of this Act, give notice to the Local Board requiring them to discontinue the flow or passage of sewage through either of the two outfalls into the Lee, belonging to or under the control of the Local Board at the passing of this Act.

(2.) Within two years after the passing of this Act, the Local Board shall make provision by proper depositing tanks and efficient filter beds, or otherwise, by the best known practicable process for the purification, clarifying, and disinfecting sewage collected in the sewerage works belonging to them, or under their control, and for causing the effluent water from that sewage to be discharged out of the lower of the two outfalls aforesaid, and discontinue the discharge through the upper of those outfalls, and brick up and permanently close that upper outfall.

(3.) If the Local Board fail to do so, then at any time after the expiration of two years from the passing of this Act, the Conservancy Board may proceed as if this section had not been enacted in this Act.

(4.) After the expiration of two years from the passing of this Act, the Conservancy Board shall not give notice to the local Board requiring them to discontinue the flow or passage through the said lower outfall of the effluent water aforesaid, if and as long as the same is clarified and disinfected, so as not to be offensive or injurious in the judgment of the Conservancy Board (in case of difference between the Conservancy Board and the Local Board), in the judgment of an arbitrator appointed by the Board of Trade on the application of either party, and the decision of the arbitrator shall be final, and the cost of the arbitration shall be in his discretion.

Mr. *Pead*, on behalf of the trustees of the River Lee, objected to the clauses.

After some discussion, the Chairman stated the Committee would allow Mr. Michael to produce evidence in support of his clauses at the next meeting of the Committee.

Mr. *Wilson* proposed the following clauses on behalf of the West Ham Local Board of Health, which he stated was agreed to by the promoters.

LEE RIVER CONSERVANCY.

64A.—Provided that with respect to the sewerage works of the West Ham Local Board of Health (in this section referred to as the Local Board), the following provisions shall have effect :—

(1.) The Conservancy Board shall not, within two years of the passing of this Act, give notice to the Local Board requiring them to discontinue the flow or passage of sewage through either of the two outfalls into the Lee, belonging to or under the control of the Local Board at the passing of this Act.

(2.) Within two years after the passing of this Act, the Local Board shall

shall make provision by proper depositing tanks and filter beds, or otherwise, by the best known practicable process for the purification, clarifying, and disinfecting sewage works belonging to them, or under their control, and causing the effluent waters from that sewage to be discharged out of the lower of the two outfalls aforesaid, and discontinue the discharge through the upper of those outfalls, and brick up and permanently close that upper outfall. 30 April 1868.

(3.) If the Local Board fail to do so, then at any time after the expiration of two years from the passing of this Act the Conservancy Board may proceed as if this section had not been enacted in this Act.

(4.) After the expiration of two years from the passing of this Act, the Conservancy Board shall not give notice to the Local Board requiring them to discontinue the flow or passage through the said lower outfalls of the effluent water aforesaid, of and as long as the same is clarified and disinfected, so as not to be offensive or injurious in the judgment of the Conservative Board (in case of difference between the Conservancy Board and the Local Board), in the judgment of an arbitrator appointed by the Board of Trade on the application of either party, and the decision of the arbitrator shall be final, and the costs of the arbitration shall be in his discretion.

Mr. *Wilkinson*, on the part of the promoters, stated that he had not been informed that such was the fact, but he would ascertain whether it was so by Monday.

Monday, 4th May 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Maxwell.
Mr. Benyon.	Mr. Powell.
Sir George Bowyer.	Mr. Sheridan.
Lord John Hay.	Mr. Surtees.
Mr. Alderman Lawrence.	

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

4 May 1868.

Mr. *Michael* handed in the following clause on behalf of the Tottenham Local Board of Health:—

LEE RIVER CONSERVANCY BILL.

"Provided that with respect to the sewerage works of the Tottenham Local Board of Health, the Local Board shall, within two years after the passing of this Act, provide depositing tanks and filter beds, and otherwise, by the best known practical means, purify and disinfect the sewage passing through the works of the Local Board, and after such purification and disinfection of such sewage matter as aforesaid, to the satisfaction of the Conservancy Board, or in case of difference between each Board and the Tottenham Local Board, to the satisfaction of an arbitrator to be appointed by the Board of Trade, shall and may discharge the effluent water remaining after such deposition and purification as aforesaid into the Lee, through an independent outfall, to be made therein by the said Board."

The room was ordered to be cleared.

After some time, Counsel and parties were called in.

The *Chairman* stated, that the Committee had considered the different clauses which had been laid before them, and had arrived at certain conclusions which would enable all the questions to be disposed of. The Committee, without disposing finally of the clauses before them, because the Counsel for the promoters and the landowners had not been heard, might deal with the questions so far as they would go in derogation of those general powers in favour of particular towns, and classes of towns, and they had arrived at the following conclusions:—

With regard to Luton, the powers of the new Board of Conservancy should not be exercised to stop up the drainage into the river at present existing, so long as the town of Luton complied with the conditions of the decree of the Court of Chancery.

With regard to Hertford, the Committee were of opinion that the Board of Conservancy should not have power to stop up the outfall of the town of Hertford, so long as the town of Hertford complied with the conditions of the Act of 1854, and the subsequent Act which was passed to amend that Act.

With regard to Tottenham and West Ham, the Committee were of opinion that the power to stop up the outfall should be limited in the manner proposed by the clauses which had been tendered for Tottenham and West Ham;

Ham ; and instead of those being special clauses for West Ham, they should be general clauses, which should take effect at a point to be defined below the intake of the water companies, and in defining that point care must be taken so as to prevent any back-flow from the outfall of any drainage which must be sufficiently below the intake of the water companies.

The clauses which had been handed in should be altered, so as to give the towns, not only the means of carrying on these particular works, but also, if they desire it, of making irrigation works, or any other works for the disposal of the sewage, that should be found to be more expedient, and therefore the further provision would be added to the clauses, that they may adopt any other works to the satisfaction of the new Board of Conservancy.

With regard to Tottenham, if the Chancery suit were still pending, the Committee would put in a proviso that this Act shall not affect those Chancery proceedings.

With regard to Messrs. Cook's claim to drain their sewage direct into the River Lee, the Committee were of opinion that they cannot have that power, but that if they were within the metropolis they were entitled to have their drainage carried into the main drainage, and that no person within the metropolis can be at liberty to drain his sewage direct into the River Lee, but that all persons must be prohibited ; and if there is not power under the Metropolis Local Management Acts to have those drains diverted, and if there is not an obligation upon the local authorities with regard to the diversion of that drainage, a general clause must be introduced, that all drainage works must be undertaken according to the provisions of the Local Management Act for the diversion of the drainage within the limits of the metropolis, which would, of course, embrace Messrs. Cook's premises.

In coming to these conclusions, the Committee wished it to be understood that they did not at all want to encourage the idea that filtering sewage, and so forth, was the best mode of dealing with it. They entirely adhered to the views expressed in the Report of the Committee of last Session, and in the Report of the Royal Commission. They think that, although they have not passed compulsory powers against the parties who incurred the expense of dealing with the sewage in another manner, they may leave it to those parties to grow wiser and to take better means for disposing of their sewage than they have hitherto done. In abstaining from passing any compulsory clauses against them, the Committee have been rather influenced by the consideration that they might force the towns into the hands of the landed proprietors, and subject those towns to an unnecessary degree of payment ; and therefore the Committee think it better to leave it to the towns to take their own course, when the time and opportunity will permit, with regard to the disposal of their sewage.

Mr. *Round*, on behalf of the towns of Ware, Cheshunt, Bishops Stortford, and Great Waltham, stated that he should propose that some equitable arrangement should be made, whether in the nature of an annual payment, or whether in the nature of a lump sum, that if the town is drained to the satisfaction of an arbitrator, that the arbitrator should say what proportion the New River Company and the East London Company were to pay.

The Committee deliberated.

The *Chairman* stated that the Committee did not think that upon such a broad question of policy any further evidence that Mr. Round could adduce would alter the opinion that they had formed upon the general view of the Reports and the evidence, and therefore the learned Counsel exercised a wise discretion in not offering that evidence to the Committee.

Mr. *Round* then stated that after that intimation he would retire from further discussion, and reserve his opposition for elsewhere.

4 May 1868.

The Committee then proceeded with the consideration of the postponed clauses.

Mr. *Parkes* brought up some additional clauses, and proposed the following, as amended :—

Conservancy Board.

Incorporation of Lee Conservancy Board.

"There shall be a body of conservators for carrying this Act into execution, the full number of which shall be thirteen, and who are hereby incorporated by the name of the Lee Conservancy Board, and by that name shall be one body corporate, with perpetual succession and a common seal, and with power to take and hold, and to dispose of (by grant, demise, or otherwise) land and other property, which body corporate is in this Act referred to as the Conservancy Board."

Commencement of powers of Board.

"The power and functions of the Conservancy Board shall commence on the first Friday in April, One thousand eight hundred and sixty-nine (which day shall, for the purposes of this Act, be deemed the time of the establishment of the Board)."

Conservators representing Landowners.

Election and tenure of office of conservators representing landowners.

"Before the first Friday in April, One thousand eight hundred and seventy one, an election shall be held of conservators, representatives of landowners, and the powers and functions of the persons so elected shall commence on the first Friday in April, One thousand eight hundred and seventy-one; and they shall remain in office as conservators for two years from that day, and no longer; and before the expiration of that period of two years, an election shall be held for conservators, representatives of landowners, in the place of the persons first elected as such representatives, and the powers and functions of the persons so elected shall commence on the first Friday in April next following their election; and they shall hold office for two years, commencing on that day, and no longer, and the like provision shall have effect in and for every subsequent period of two years, but every person going out of office under this section shall be re-eligible."

Mr. Alderman *Lawrence* moved, as an amendment, the insertion of the following words: "At the end of the first two years, three of such representatives so retiring to be elected by ballot, subject to re-election."

The *Chairman* stated, the Committee were of opinion that the amendment should be negatived.

Mr. *Parkes* then proposed the following clause :—

The qualification of electors of representatives of landowners shall be regulated as follows, namely—

"1. Every person who at the passing of the Act was a Trustee of the Lee Navigation shall be an elector for life.

"2. Every person who was *ex-officio* a trustee at the passing of this Act, and his successor in office, except the Lord Mayor and Aldermen of the City of London, the Recorder of the City of London, the Governor, Deputy Governor, and Treasurer of the New River Company, and the Members representing in Parliament the City of Colchester.

"3. Any person being in his own right or in right of his wife, in actual possession, or in the receipt or enjoyment of the rents and profits of lands in which he is entitled to an estate of inheritance, or freehold, of the rateable annual value of one hundred pounds or upwards, such lands forming an entire estate abutting in some part thereof on the Lee, or on the towing part thereof, or on any river or stream specifically named in this Act as a tributary of the Lee."

Mr.

Mr. Alderman *Lawrence* moved as an amendment, to leave out all the words after the words "in office." 4 May 1868.

The room was ordered to be cleared.

After some time, Counsel and parties were again called in.

The *Chairman* stated that the Committee were in favour of the clause proposed by Mr. Parkes.

The *Chairman* stated that the Committee had better proceed with the evidence proposed to be given by Mr. Cripps, in order to save the expense of the parties coming up again.

Mr. *Henry Trethewy*; Examined by Mr *Cripps*.

Mr. *H. Trethewy.*

1343. Do you live at Silso, in the county of Bedford?—Yes.

1344. Are you a Land Surveyor there?—Yes.

1345. I believe you have been employed by the Midland Railway Company, and have had a great deal of experience there?—Yes.

1346. Are you fully and well acquainted with the upper course of the Lee and its tributaries, in the counties of Bedford and Hertford?—I am particularly well acquainted with them.

1347. And especially with the Mimram?—Yes.

1348. Which is one of the important tributaries above Hertford?—Yes.

1349. Is the Mimram the river which runs near Whitwell?—Yes.

1350. In its course down to the Lee, does it go amongst residential properties?—Yes.

1351. Are those residential properties principally the property of Lord Cowper?—And my Lord Dacre; with the exception of one or two; there are two which are not Lord Cowper's.

1352. What number of miles does it go through Lord Cowper's property?—Four or five miles.

1353. Do you know that stream well?—Very well indeed.

1354. Is that a perfectly good and pure stream?—It is as pure a stream as any I know.

1355. I believe it is so pure that it is drank at Lord Cowper's residence?—Yes.

1356. Is the River Lee also, through the whole of its course down to Hertford, a perfectly pure stream?—Yes, it is.

1357. Is it a rapid stream?—A very rapid stream, except where interfered with by mills.

1358. Are the beds of the stream gravel for the most part?—Chiefly gravel, almost entirely, and very springy.

1359. Does a great part of the water that goes down rise in the gravel?—Yes; and there are many places where the ground is perfectly level. There are springs cut for the purpose of cultivating water cresses, and those are very clean, and a great feature of the river.

1360. Does that show a great purity of water?—It seems to be all filtered there, in many places along the banks.

1361. The watercress beds are very common?—Watercress beds are very common all along there.

1362. Have you considered the clause with reference to any interference with the right of fishing?—I have.

1363. Does such a clause appear to you to be objectionable?—Extremely so.

1364. Do the proprietors of the different estates, in an ordinary way, take care of the fishings that pass through them?—Yes.

1365. You have had an opportunity, I believe, of considering this matter with several of the landowners on the stream?—Yes; I had communication with several of them.

1366. Do you know that generally they feel that the powers proposed to be given are objectionable?—They do; almost every one I have spoken to, and I have spoken to nearly all.

1367. Do they feel, and do you feel, as a land agent, conversant with this matter.

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matter, that the effect of such a Bill as this must be to diminish the value of the property, as residential property?—Very materially.

1368. People object very much for any one to have the power of interfering with them at all?—It would interfere very materially with the value of the property.

1369. I will not take you through all these particular streams; you know them all generally?—Yes.

1370. Are they all pure streams of running water?—I know the Lee, from its source to Hertford, well. In Mr. Leigh's park it is very clear, with the exception of its passing the town, after it passes the park at a place called Newmanwell. I know the whole of the stream down to Hertford. I have been very recently through the country through which the River Lee passes, and I may say that I purchased the line of the railway which passes from Luton to Welwyn. I am acquainted with it from its passing through Lord Cowper's property.

1371. Does that map show in colours the parties who are actually petitioning against this Bill (*referring to a map produced by the Witness*)?—I believe it does. I know the properties represented there—Mr. Samuel Baker, Lord Cowper, Mr. Cherry, Mr. Parker, and many others.

1372. I believe they are all petitioners?—I understand so.

Mr. *Cripps* stated that he referred simply to the petitioners he represented, and not to the whole of the petitioners.

Cross-examined by Mr. *Wilkinson.*

1373. In what district do you reside?—I reside in Bedfordshire, at a place called Silsoe, about 10 miles from the source of the River Lee.

1374. Ten miles above the source of the River Lee?—Not above it; it is north of the River Lee.

1375. As I understood you, you stated that you are agent to several landowners in the district?—Yes.

1376. And you are well acquainted with the district yourself?—Yes.

1377. I do not quite gather what is the particular objection which you make to the provisions of this Bill; is it on the ground of anything of an oppressive character that you see should be out?—Yes. The grounds have been very well set forth by the learned Counsel in his opening speech.

1378. When you direct me to the opening of my learned friend, that will include the whole of the watershed of the River Lee?—Yes.

1379. That is a question which has been decided by the Committee; but I want you now to point out which particular clause, or which particular powers taken by this Bill, you consider would be oppressive to the landowners?—Many would occur to me.

1380. *Chairman.*] Have you read the clauses of the Bill?—Yes.

1381. Then refer to Clause 61; that is not objected to; Clause 62 is the first which is objected to?—I would refer to the 2nd paragraph of Clause 61.

1382. Mr. *Wilkinson.*] That relates to the discontinuance of existing sewerage works?—"To cause, or without lawful excuse (proof whereof shall be on the person accused), to suffer any sewerage or offensive or injurious matter to pass into the Lee or any of its tributaries, or through any sewer, drain-pipe, or channel not used for that purpose before the establishment of the Board." That is prospective.

1383. You need not trouble yourself with that; go to Section 62, which relates to the discontinuance of existing sewerage works; there are no existing sewerage works established in this district, are there?—I do not know what you mean by sewerage works.

1384. I want to find out the particular grievance which you make as to any of the clauses in the Bill; is it that you object to the sewerage from your districts being at all interfered with; is that what you mean?—I do not quite perhaps understand what you mean by sewerage. There is sometimes what is termed a soakage, but sewerage works there are none.

1385. Have you read the evidence taken by the Pollution of Rivers Commission?—No.

1386. Have you read the evidence given before the East London Waterworks Committee?—No.

1387. Are

1387. Are you aware that on the banks of the river there are villages where ne privies and other matters overhang actually the course of the river, and here the drainage is directed into the river without any attempt at dilution or urification?—I am not aware: I have never seen any of the kind; there may e.

1388. Accepting from me, as a fact, that such is the case, do you think it esirable in the interest of your district?—Where is it?

1389. Supposing that to exist in your district, do you think that a desirable tate of things?—No.

1390. Then may I presume that any general measure which would prevent ne pollution arising from the houses in villages actually overhanging and raining in the river, and from similar causes the drainage of undiluted matter nto the river, would that, or would it not, be a general benefit to your district? —It would be a benefit to remove it, of course.

1391. Is there any difficulty in the district in which you reside in obtaining and for the purpose of irrigation?—I think there would be very great difficulty.

1392. How would that difficulty arise?—From the unwillingness of persons o sell the land. I am speaking more particularly of the district between Luton nd Hertford which is chiefly a residential district. The proprietors would be ery unwilling, I think, to sell land for the purpose of irrigation.

1393. At the same time that is a district, is it not, where there is plenty of waste and to be obtained if the proprietors are willing to part with it, and there would e no difficulty, with the consent of the proprietors, in obtaining land?—No.

1394. Do you find in your experience that proprietors are willing to part vith land for objects which would benefit the rest of their estates?—Not as a ule; but I find landowners would be extremely unwilling to part with land for his purpose; and besides, I may observe that the water is as pure when it goes here as it would be after it left the land, and possibly more so.

1395. Are you aware that you are at issue with the evidence taken by the Commissioners on that point?—No; I do not know anything about their evidence, I only know what I have seen myself.

1396. Are you aware of the fact of a Commission having been instituted to make local inquiries on the spot?—Until I came before this Committee I was not aware of it.

1397. Did you never hear of any meeting at Luton, Ware, and Hertford?—No.

1398. You never heard of that?—No.

1399. Have you yourself any knowledge of irrigation?—I have had, as a farmer.

1400. Where was that, was it in this district?—No, in Herefordshire; but I have had to do with water meadows in other places.

1401. Was that irrigation with sewage?—Irrigation from the farm-yard.

1402. You have had no greater experience?—No, I do not remember at this moment. I have had the care of water meadows in the different places where I am agent.

1403. Have you had any experience in the application of the dry earth-closet system?—I have got one in use myself.

1404. Do you find that an advantage?—No, they do not seem to like it very much.

1405. Is that for your own residence?—Yes; I have one in my own residence, and I have one at two or three other places.

1406. What induced you to adopt a system of that character?—One great reason why I adopted it was, that on one estate for which I am agent, there was a difficulty in getting privies, from the peculiar plan and description of the building, so I adopted the earth-closets.

1407. In fact, it was to escape the inconvenience and nuisance arising from the system which was before in operation?—Yes, it was because there was no place for a privy to be put, except under a shed, and therefore having heard about those dry earth-closets I tried one there.

1408. Do you think that instance would be confined exclusively to yourself? —I know of no other place such as this.

1409. Do you not know of other houses where the same system might be adopted

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adopted with advantage?—No, I do not. I do not think it is an advantage at all; I think it is a great trouble. There is a great difficulty in getting rid of it, and in getting people to use it.

1410. That is your experience with regard to irrigation with sewage, either as applied to land in a liquid shape, or as to the dry earth-closet system?—I do not know of any other at present.

Re-examined by Mr. *Cripps.*

1411. From your experience of irrigation, do you think it possible to avail yourself of the sewage of villages and small places as a thing to be disposed of by irrigating lands?—I do not think it would do at all.

1412. In order to create any system of irrigation which could be worked, you must have a large quantity of sewage matter?—Exactly.

1413. Such as you might obtain from a populous town, but which you could not obtain from any village in any quantity so as to make it practicable?—Just below the village of Whitwell the water is perfectly clear in the bed of the River Lee, which is almost a natural valley. It is astonishing how soon water becomes pure there, and I have observed after rain that the water does not seem at all discoloured. If a little water finds its way from the road coming off the hills into the stream a few yards, the impurity seems to be all taken away from it at once; it is very rare that the water is at all discoloured from rain.

1414. There are a great number of watercress beds, are there not?—Yes.

1415. That indicates the great purity of the stream?—Yes.

1416. Are there any fish in the stream?—There are very fine trout.

1417. Mr. Alderman *Lawrence.*] I think you stated that the water was pure until it came to a certain place?—From just below Wellwyn it becomes pure immediately,

1418. Where do you find that the river becomes impure?—At Luton.

1419. Sir *George Bowyer.*] At Luton it becomes to be impure?—Yes.

1420. Then it is purer above Luton than it is below?—It is purer above Luton than it is immediately before it comes into their works, but after it leaves their works it goes through Mr. Leigh's park, and then it is perfectly clear.

1421. What is it after it leaves Luton, is it pure or impure?—Very pure after it leaves the works.

1422. What is it when it gets below Luton?—It is not so pure in its passage from Luton to the works as it is below Luton.

1423. It becomes purified below Luton to some extent?—It seems as pure after it leaves the works as it is in Luton.

1424. Mr. *Surtees.*] How far from Luton are the works?—They are close to the town.

The Right Hon. Earl *Cowper* called; Examined by Mr. *Cripps.*

Right Hon. Earl *Cowper.*

1425. I BELIEVE your lordship is owner of all the property on the Mimram where it joins the Lee up to Pigswell?—Yes.

1426. That is just below the village of Whitwell?—Yes; a little below—about three quarters of a mile below.

1427. I need scarcely ask you whether you know the stream there very well?—Yes; I know it particularly well.

1428. Is that a stream of running water?—It is quite clear directly it enters my property down to Hertford.

1429. Is the water from the stream actually drunk as it passes your residence?—Yes; I drink it myself.

1430. I believe it is perfectly clear?—It is filtered. I find it clearer and far better to drink than water which I obtain from a well. I drink it in preference

1431. Besides that stream to which your attention has been particularly called, you know the other tributaries of the Lee above Hertford?—I have a general knowledge of them.

1432. Are they also, in their present state, good pure running streams?—I cannot speak so positively to those as to the one that goes through my property, but my impression is that they are clear and pure water.

1433. You

1433. You take a great deal of interest in this Bill?—I do.

1434. You have ascertained the feeling of the landowners with reference to ?—Yes; I have a petition with ten signatures. It was got up in a hurry; each of the landowners thinking it very objectionable, did not like to move first. It was all got up in two or three days. I think if we had had more time, we might have got many more signatures.

1435. However general may be your intercourse with the landowners on the subject, are you aware that they object very much to have the restrictions imposed upon them which are now sought to be imposed upon them by this Bill?—Yes; every landowner that I have spoken to, without exception, declares that he considers some of the clauses objectionable.

1436. I do not know whether you will confirm what I stated just now, that you do not object to such a clause as Section 61, which refers to new works, but that you object to Clause 62, and all the following clauses, so far as they affect the landowners?—Yes.

1437. Then I may take it with regard to all the following restrictive clauses, that you will object to all those as being applied to the upper and more navigable part of the Lee?—Yes.

1438. Up to this time, as we know, the jurisdiction of the trustees has been confined to the navigable portion of the river, that is that portion of the river which is below Hertford?—Yes.

1439. Do you see any reason in the state of the river, or the state of things generally, why it should now be extended to any of the upper parts of the river?—I see no reason for that.

1440. In particular, as to any restriction about fishing, should you consider that to be a very unnecessary restriction?—I think it perfectly unnecessary in any part except the navigable part; it might be very vexatious. Of course it depends upon whose hands it is in. I do not see the smallest necessity for interfering with the fishing above the navigable part of the river.

1441. I suppose you would say, with reference to all these restrictions, that whatever they are, they might become in the hands of the Board very obnoxious to the landowners?—Yes, I think so; the power of entering and searching boats and so on, are all interferences without any reason existing which make such an interference unnecessary.

1442. The water-bailiffs would have power to pay you a visit from time to time?—Yes.

Cross-examined by Mr. *Wilkinson*.

1443. At present you are surrounded by pure streams and open fields?—Yes.

1444. So long as that state of things continues, there will be nothing offensive or injurious which would be likely to pass into the Lee?—Nothing that would really make the water unfit for drinking.

1445. You mentioned to my learned friend that you objected to Clause 62, and the subsequent clauses?—Yes.

1446. Now, with regard to Clause 62, if you read the language of that clause, you will see that it applies simply to sewage, or offensive and injurious matter; so long as the streams are pure, no vexation would arise under that clause?—There may be some little overflow from a homestead being near the river, and in order to remedy that, they might oblige you to pull the whole homestead down, and rebuild it further off.

1447. I am sure it will not be imagined that the clauses of this Bill have been framed with any intention to carry them out in that oppressive way; they have been framed purely for the benefit of the general district?—There is no guarantee that they will not be carried out in an oppressive way.

1448. You observe that Clause 62, at any rate, implies that there is offensive or injurious matter existing?—Certainly.

1449. I presume you would advocate that permission should be given to continue that?—Well, my point is, that it is so slight that it does not affect the water; but it would be very expensive to avoid some little sewage being put in.

1450. Would it not be better, for the purposes of general legislation, that cases of that sort should be left to the discretion of those who have to administer the

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the law, rather than by a section giving an express provision in favour of a particular landowner, that the district should be exempted from the operation of the law?—If the general district could be exempted, without injuring the water, I think it should. If you can exempt the whole of the upper part of the river, without doing any material harm to the water, I think you should do so.

1451. If you exempt the whole of the district, then you do away with the benefit which this Act is intended to confer, so far as the whole district is concerned?—Above Hertford.

1452. That is supposing you take it for granted that the state of the country above Hertford will continue as it is now?—We do not object to Clause 61, which prevents our opening any new sewers.

1453. Does not the same objection apply to both; if you say you do not object to the provision of any new nuisance, why should you object to that which simply controls the existence of that which is a nuisance now?—Because at any moment I may be called upon to lay out more than 1,000 *l.* for remedying what is really not a nuisance.

1454. Do you interpret this clause that under the words of this clause you think you could be compelled to do anything in respect of that which was not offensive or injurious?—It depends so much upon who is the judge of what is offensive or injurious.

1455. I understand that is your lordship's objection to this clause?—Yes.

1456. I do not wish to take your lordship through the clauses in detail, but I will take as an example the prohibition against placing manure along the banks; does that appear to your lordship to be objectionable?—If you manure a field up to the water's edge some little amount of sewage must go in.

1457. If your lordship has read the clause you will have observed the words, "without reasonable excuse." It is only to apply to placing "any manure or other substance on the banks of the Lee or any of its tributaries, so that any offensive or injurious matter will drain or run, or be likely to drain or run therefrom into the Lee;" I understand that your lordship has no objection to that clause?—I have not at this moment got before me the clause you refer to.

1458. I was referring to Clause 67, and the subsequent clause relating to the improvement of the channel?—Section 67 refers to Section 14 of the Lee Improvement Act of 1850.

1459. You have no objection to that clause?—No.

1460. The same answer would apply to the subsequent clauses, which relate to the same subject, I presume?—Yes.

Mr. *Cripps* stated that his clients were not concerned with the navigable part of the stream.

1461. Mr. *Wilkinson.*] Let me call your attention to the bye-laws, one of which relates to bathing, that is Clause 75; do you object to the power of putting the bathing of a district of this character under proper regulations?—It strikes me that there is no necessity for it. Of course I should object to improper bathing taking place.

1462. Supposing it was confined to a certain distance of the navigable part, you would not object to it?—No.

1463. You would object to the unlimited extension of that to the tributaries?—It strikes me as an unnecessary power.

1464. The limiting of the bye-laws to two miles from the intake of the New River Company, which your lordship knows is below Hertford, would be unobjectionable to you; you think, with regard to the river within the limited distance of two miles from the intake of the New River Company, that it would not be desirable that there should be vested in the Conservancy Board the power of regulating the bathing?—I think a mile would be quite sufficient to regulate.

1465. Then on the distance being limited to a mile, you would see no objection to that?—No; I think not.

1466. Then the next clause you surely will not object to, namely, that persons should be prohibited from throwing dead animals into the stream?—My point with regard to this is, that where there is no danger of these things being done, or any nuisance being occasioned, you do not want to insert such clauses.

1467. Then, as I understand, your answer is based upon the fact that there is no danger at present to be apprehended of these things being done?—This would apply to sheep-washing.

1468. I want

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1468. I want to see how far your objection extends?—I think it would interfere with washing sheep through the whole course of the agricultural district, which might be very inconvenient.

1469. Then, if I understand, if the sheep were washed without offence or injury, there would be no objection?—No.

1470. Would that at all modify your objection?—Of course it would.

1471. With regard to fishing, has your lordship's attention been called to the 80th clause, which saves all private fishing rights?—The powers and duties of water bailiffs and other officers of the Conservancy Board I think are vexatious. There is an exception taken by Clause 80, in which it is said that private rights shall not be interfered with, with the exception of the powers and duties of the water-bailiffs and other officers. Some of those exceptions are considered to be vexatious.

1472. Then you object to the power given by Clause 79 to the water-bailiffs, and you think it is not sufficiently qualified by Clause 80?—It is distinctly excepted by a general provision of this Act relative to the powers and duties of water-bailiffs, and I say that the security we get by Clause 80 is nullified.

1473. You have taken a great interest in the general character of this district?—Yes.

1474. Did you attend the meetings of the Pollution of Rivers Commission?—I did not. It is only lately that my attention has been called to it.

1475. Has your attention been called to the evidence given before the Commissioners?—I cannot say that it has.

1476. Your Lordship has not read that evidence?—I have not.

1477. Supposing evidence to have been given before the Commission, of the existence of very great nuisances indeed, from the town of Luton draining into the River Lee, and also from Hertford, would that at all modify your opinion as to the necessity of some general provision for the purification of the water of this district?—We do not ask anything for Hertford; I believe it has been already decided that Luton shall not be included in the Act.

1478. Your Lordship has been greatly misinformed; we are speaking of the present state of the district; have you any guarantee whatever that the future state of the district may not require very much more stringent precautions against polluting the river than are now required?—I do not see that it can; Clause 61 will guard against that.

1479. Do I gather from you that you think the 61st clause will be a sufficient protection against any state of things which may arise in consequence of the increase of population throughout the district?—I think so.

1480. Supposing the Committee to be of a different opinion to your Lordship, and think that some control should be exercised over that district, do you think it desirable or not that that control should extend over a certain district, that is, over the watershed of the Lee, instead of being confined to a specific river?—I do not think it is necessary to extend this power over any part of the river.

1481. I understand your Lordship to be giving that evidence in ignorance of the evidence which has been taken by these Commissioners?—I can only speak with regard to what I feel myself.

Mr. *Cripps* stated that he would not detain the Committee by re-examining.

[Adjourned till Thursday next, at Twelve o'clock.

Thursday, 7th May 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Maxwell.
Mr. Benyon.	Mr. Powell.
Sir George Bowyer.	Mr. Sheridan.
Lord John Hay.	Mr. Surtees.
Mr. Alderman Lawrence.	Mr. Wise.

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

7 May 1868.

THE following additional Petitions against the Bill were read.

The Petition of William Thomas Henry Strange-Mure.

Messrs. *Sherwood, Grubb, Pritt & Cameron*, appeared as Agents in support of the Petition.

The Petition of the Conservators of the River Thames.

Messrs. *Wyatt & Metcalfe* appeared as Agents in support of the Petition.

Mr. *Davison*, on behalf of the promoters, respectfully asked the Committee whether, having taken into consideration the 75th section of the Local Government Act, Clause 7, of the Sewage Utilisation Act, c. 113, and also the 30th and 31st Vict. c. 113, they would in any degree modify their views as regards Luton and Hertford.

Mr. *Hope Scott*, on behalf of the Water Companies, supported the application.

After some discussion, the room was ordered to be cleared.

After some time, Counsel and parties were called in.

The *Chairman* stated that the Committee had arrived at the following resolution:—

"That the Committee will re-consider their conclusions announced by the Chairman on the 4th of May, with regard to Hertford and Luton, when the provisions relating to those towns are submitted for the determination of the Committee."

Monday, 11*th May* 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Powell.
Mr. Benyon.	Mr. Sheridan.
Sir George Bowyer.	Mr. Surtees.
Mr. Alderman Lawrence.	Mr. Wise.
Mr. Maxwell.	

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

Mr. *John Glass*, called; Examined by Mr. *Pember*.

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1482. You are the Traffic Manager of the River Lee?—Yes.

1483. I believe you have been so for many years?—For the last 17 years.

1484. You know the condition of the navigation, and the boats that ply upon the River Lee very well?—I do; I have been on the navigation for more than 30 years.

1485. You have heard the question which has been just now raised as to the number of tons?—I have.

1486. Will you tell the Committee how many barges there are of 40 tons, 30 tons, and 20 tons respectively, plying on the river?—All the barges are above 40 tons; there are some boats which come occasionally on the River Lee Navigation from the Grand Junction Canal, but they are not regular traders; they are strangers and persons who would not want to have a vote; they have nothing to do with the navigation whatever.

1487. *Chairman.*] When you speak of their not being regular traders, do you mean that they do not regularly trade on the river, or that the people themselves are not regular traders?—They are regular traders on the Grand Junction and Regent's Canal, but they come occasionally upon the River Lee Navigation, although very seldom, perhaps once a month.

1488. Mr. *Pember.*] But they are not regular traders on the Lee?—No.

1489. They come from the Grand Junction Canal?—They come from the Grand Junction and Regent's Canals with freight.

1490. I believe there is also occasionally a salt boat from Cheshire?—Occasionally.

1491. Are you able to say positively that the barges on the River Lee range from 40 tons upwards?—There are none less than 40 tons, and many as high as 90 tons.

1492. Sir *George Bowyer.*] How do you describe a barge as distinguished from other kind of craft?—A barge is generally flat bottomed, with shallow sides, and generally adapted to the size of the lock it has to pass through. Our barges average from 70 to 90 feet in length, and from 13 feet 4 inches to about 16 feet in width, and they draw when they are loaded about 5 feet of water.

1493. Do boats under 40 tons answer the description which you have given, except as to size?—They do.

1494. Then they are small barges, in point of fact, are they not?—They are adapted to the small locks on the inland canals.

1495. Can you say that they are not barges?—They are not called barges; they go by the name of boats; they are monkey boats, properly speaking.

1496. Do you mean to say that no boat under 40 tons is called a barge?—They are called punts on the Thames.

1497. Supposing a boat of 20 tons exactly resembles in form a barge of 40 tons, would that boat of 20 tons be called a barge?—No; she would be called a punt.

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1498. Mr. *Pember.*] How many of these punts are there on the river regular traders?—There are none of them on the upper part of the river. It is not worth the traders' while to have so small a barge.

1499. It is not worth the traders' while on the Lee to have so small a barge?—It is not.

1500. That is, I presume, because the locks are large enough to admit him having a large barge; he does his work more economically, having large boats, than by having the small ones?—Yes.

1501. On the Grand Junction Canal, where there are many inland locks, the boats are small?—Yes.

1502. But on the River Lee the regular traders have barges of 40 tons, and upwards?—Yes, they adapt them to the size of the locks.

1503. Mr. *Maxwell.* How many barges are there on the Lee?—They are about 70 regular trading barges on the Lee.

1504. Is that exclusive of the Stort?—Including the Stort.

Cross-examined by Mr. *Littler.*

1505. Do you mean to say there are no barges of 20 tons which go up the upper part of the River Lee at all?—No.

1506. None at all?—None.

1507. That you are certain of?—Yes.

1508. Will you tell me what proportion of these small barges there are on the River Lee?—There are none that we call barges on the River Lee of that size; there are some punts on the lower part of the navigation, but most of those are 40 tons.

1509. How many of these punts are there that are under 40 tons?—Very few.

1510. In your view, it does not very much matter whether you make it 40 or 20, because it does not make very much difference in the number of persons who vote?—It would be easier for a man to get three 20-ton barges than one large barge of 40 or 50 tons.

The *Chairman* stated that the Committee had already passed a clause relating to the qualification of barge-owners, similar to what was now proposed, and therefore they could not re-open the matter.

The 1st Schedule was then agreed to.

The 2nd Schedule was read.

Mr. *Wilson* proposed that the second charge of 5*s.* be altered to 3*s.*

Mr. *Wilkinson*, on behalf of the promoters, did not object to the alteration.

Mr. *Littler* stated that the last paragraph of the Schedule would override Section 45 of the Lee Navigation Act 1850, and, therefore, objected to the clause.

Mr. *Pember* then called the following witness:—

Mr. *Nathaniel Beardmore*, called; Examined by Mr. *Pember.*

Mr. *N. Beardmore*

1511. It is necessary that I should put this through you; do you know this part of the navigation which is referred to?—Yes; I was concerned for the River Lee Trustees in 1850, when the Act was passed.

1512. That referred to the channel existing at the time?—At that time there were gates, called Bow tide gates. When we reconstructed the works, we made a pair of gates precisely similar to the old ones, and made every convenience for going through. We also made a lock alongside for the use of the River Lee trade, to economise water under the Act by which the water was allotted to the Water Companies. We also shut up, by that Act, some very large flour mills which worked the water off. The combined result of this operation was, that whereas at neap tides barges could not move at all, and I have seen them for five days entirely fixed, the water way was opened, and they have not been stopped since. The barges find great advantage in going through the lock. They tried to enter the lock, and there was a dispute. They had to wait for the gates to be opened; as the tide flowed they tried to get through the lock; there

was

was a dispute. They went before the magistrates, and they agreed to pay when they wanted to go through the lock, and the thing has gone on comfortably ever since.

1513. The old gates which are mentioned in this Act, Section 45, are still open to them, if they choose to use them, are they not?—Yes; I may say, in addition to that, owing to the water being kept up to the upper side of the dock, instead of being drawn down to the mill every tide, as before, the current has very largely increased, and, having a free right of passage for the general traffic through this arm, we have had to enlarge and deepen it very much indeed. We now exercise powers which were simply powers of passage before; we now keep the place up and widen the river. They spent 300 *l.* in widening and making the river free, within the last two months; therefore, we thought it would be better to have a moderate toll, and to equalize the burden over those who really used the river. The trade has got so large, and other local parties who have been free hitherto would not have room to lay their barges in safety, and the river traffic would not have room to pass by; and, therefore, we are obliged to spend very considerable sums of money. I am bound to say it is thought down there, on this particular section of the river, that the powers of the River Lee Trustees do not extend to them, and they defy us, if they can, to stop barges passing, and so on; and they think we have no power, as they read the Act. Bye laws were granted. The trustees wish to extend the benefit to this part of the river, the same as the rest of the river; therefore, we think there should be a fair share of the burden put upon it.

1514. How much money do you say was spent in making the second lock?—£.30,000 was spent in making the new lock, but it is not anything like the total sum which has been spent. Last year we spent 500 *l.*; this year we spent 300 *l.*, and a few years ago we spent 500 *l.* on this particular section; so that I should think the money spent in improving the little bit of the river which is free would be something like 40,000 *l.*

1515. You mean the little piece from Bow Creek to Old Ford Locks?—Yes; there are other improvements still to be effected. There is a bad turn which I hope also will be improved. When I came to the River Lee first, it was an almost impassable bit of river. It was, in fact, a mill head; it is now becoming a very good piece of navigation. At the same time, I may say there is a good deal of cleaning going on. We have incurred a great deal of expense in keeping the filth out of this part of the river, which has been very liable to filth coming into it: we have had a great deal of dredging mud, and so on. At one time we spent 60 *l.* in two months in liming it to keep it sweet.

Cross-examined by Mr. *Littler.*

1516. The liming was not required by the barge-owners?—The barge-owners were the persons who benefited by it.

1517. This part of the river has always heretofore been perfectly free, has it not?—No, there has been a voluntary payment of 2 *s.* and 2 *s.* 6 *d.* for passing through this lock.

1518. If it is a voluntary payment, then it has been free?—If they want to go through the lock they pay for it.

1519. I believe you gave evidence with regard to this Act of 1850, did you not?—Yes.

1520. You had these works in contemplation when that Act was passed?—Yes.

1521. The whole of them?—Yes.

1522. You gave your estimate for all these works?—Yes, I did; but they have exceeded enormously the estimate.

1523. Section 13 of this Act is one which gives power to make these new locks and tide gates?—Yes.

1524. Section 14 is one which gave you power to deepen the navigation, straighten the channel, and so on?—That I cannot speak to without seeing the Act. We have done a great deal more than this Act empowered us to do.

1525. What have you done that this Act has not empowered you to do?—We have straightened, deepened, wharfed, and got a great deal more done than the Act empowered us.

 1526. Have

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1526. Have you done that without any powers?—We have done that under our general powers, out of the funds that we have obtained; the surplus tolls.

1527. The general powers are the powers conferred by this Act, are they not?—I do not know that; our powers go a great deal further than that; our general powers of improvement are extra to the Act of 1850.

1528. Can you have anything much under than this section 14, which I will read to you: "And be it enacted, that it shall be lawful for the trustees to cleanse, scour, deepen, divert, enlarge, straighten, or otherwise improve the channel or course of the River Lee and to alter the level thereof, and to remove or alter such of the existing locks, docks, wharfs, lay-byes, tumbling bays, waste weirs, draw gates, bridges, roads, towing paths, and other works upon, over, or across the River Lee, and to construct all such new locks, docks, wharfs, lay-byes, tumbling bays, waste weirs, draw gates, bridges, roads, towing paths, and other works, upon, over, or across the River Lee; and from time to time to alter, remove, or enlarge, all such works respectively, as the trustees in their discretion may think proper, and to construct and maintain in such manner as they shall deem expedient, all such embankments, piers, jetties, side drains, sluices, culverts, machinery, engines, apparatus, and other works, as they shall think proper for the purposes aforesaid?—Those powers were limited by that Act; we have done a great deal more than that Act authorised us; we did it by our general powers.

1529. Can you tell me where those are limited by that Act?—By the Parliamentary plans; we have plenty of powers under the former Acts, but not under that Act.

1530. You, on the part of the Trustees, accepted this Act, with this Clause 45 in it, "Provided always, and be it enacted, that the Trustees shall not demand or receive any toll, rate, duty, or sum whatever in respect of such part of the navigation as is between Bow Creek and Old Ford Lock, but the use of that part of the navigation shall at all times for ever hereafter, and notwithstanding any alteration or works to be made by the Trustees of or in the same, continue to be wholly free from all tolls, rates, duties, and sums whatsoever." Is the whole free?—Yes, they come up through free gates now.

1531. You were aware that this clause was in the Act when you expended all this money?—Quite. It has been a matter of discussion between us already. We leave the gates open for them; they come through the gates; there is a great saving of time to traders if they come through this lock.

1532. With the exception that these gates have cost more than you anticipated, you see no reason why that state of things should be altered?—Yes; we have thrown upon us by that Act the duty of cleansing, in order that the purity of the river may be preserved; therefore I anticipate that there will be more expense.

1533. Not so much that part of the river as higher up?—Yes, we are nearer the buildings.

1534. Did you accept the proposition that you ought to pay the cost of all the drainage?—Certainly not.

1535. What are the expenses which are to be cast upon you, if they are not provided for?—The expense of keeping the things straight, and the paths safe for the public.

1536. The paths are safe now, are they not?—I should not have spent 300*l.* on them this spring if they were safe.

1537. You have been making them safe now?—We have endeavoured to keep them safe, as far as our funds would allow us.

1538. You have endeavoured to keep the place cleansed. You have left Tottenham and other places out. Are there any new duties cast upon you by this Act with regard to that part of the river. I thought the other duties were all cast upon other people with regard to those things?—We found from the growth of trade, even in spite of that, very great necessity to keep the river dredged, and to keep it sweet. I may say that through our efforts the river is better than it used to be, and therefore our efforts have been useful to the traders.

1539. You mean that they have been useful to the traders who actually use that part of the river, and do not go higher up?—Certainly, to all the traders.

1540. Dredging is the only reason you can assign why you should have these tolls?—To avoid disputes; at present 2*s.* and 2*s.* 6*d.* are paid.

Cross-examined

Cross-examined by Mr. *Wilson.*

1541. Did you give evidence when the Lee Navigation Act, 1850, was before the House?—I have no doubt I did.

1542. Are you not, as a fact, aware that those very gentlemen whom I represent, namely, the holders of property abutting on the Lee, at that time opposed that very Bill?—Quite so; the parties appeared, at all events, and it was agreed that the gates should be left free as heretofore, and the gates have never been closed.

1543. Was it not, also, actually agreed that that very clause should be inserted to get rid of their opposition; was not this a bargain proposed by us, assented to by you, and confirmed by Parliament?—The bargain has been accepted and the gates are free.

1544. How has it been kept?—The gates are free.

1545. That we shall be free for ever hereafter, notwithstanding any alteration of works to be made by the trustees, and shall be wholly exempted from all tolls and duties whatsoever?—Yes; a bargain Parliament makes, Parliament can unmake. We thought it was fairer for the parties to make all equal.

1546. You were aware, were you not, that that was a bargain actually entered into and confirmed by Parliament when this Bill was before them?—You may take it that I am perfectly aware that that clause was passed, and I acted upon it in making the gates, not only as good as the old gates, but far better. They are better worked than the old ones.

1547. Having been aware that Parliament has said that these parties were to be exempt from toll, have you not stated, a very short time afterwards, that you thought that the parties should not be exempt?—No; the parties themselves found they could go through the lock with much greater comfort and saving of time than they could go through the free gates, and one of them came in with his barge and it ended in a fight. We went before the magistrates and withdrew the summons on their agreeing to pay 2 *s.* 6 *d.* a barge. I will not be accurate as to whether it was 2 *s.* 6 *d.* or 2 *s.*, it might be 2 *s.*

1548. Was not 2 *s.* 6 *d* sought to be imposed by you in the very teeth of that section?—No, it has been free ever since. You may see 20 barges coming up on a tide through the free gates.

1549. I now want to know whether, in point of fact, the agreement you speak of was not in direct contravention of this 45th section?—That is a direct legal question. All I can tell you is that the gates were made more convenient than the old gates; the barges go through now free, and may go.

1550. Was it not a demand made by you in respect of the navigation between Bow Creek and Old Ford Lock?—We make no demand for going through the gates.

1551. What is it that the Committee is to understand you taxed them for?—They claimed to go through the lock and came in by force. We turned them out, and it ended in a fight.

1552. Are you prepared to state that it was not for that very privilege of going through the lock?—I am prepared to state that ever since the works were finished in 1851 and 1852 no craft has ever gone through the lock without paying.

1553. Notwithstanding that clause?—Notwithstanding that clause.

1554. Are you not aware that previously to your having that lock, these parties had always been free from the very commencement?—Certainly; the same gates, although much better ones, are there now.

1555. They are perfectly free as to that?—Certainly.

1556. According to your account the gates are now free?—Yes; my own opinion is that it would be much fairer if the burthen of the expense is met in the way proposed.

1557. *Chairman.*] The Schedule says, "For a barge or other craft passing through Bow Locks or tide gates." Do I understand that there are two things, that there are locks and tide gates?—Yes.

1558. There is no dispute, is there, about their going free through the tide gates?—There never has been any question hitherto.

1559. The controversy has arisen whether they can go through a lock?—Yes.

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Upon the suggestion of the Chairman the words, "tide gates" were struck out.

The *Witness.*] It is very hard upon us that in a very heavy glut of traffic they should be able to use our lock when the gates are free alongside for use; we contend that they should pay us for the use of the lock.

1560. *Chairman.*] Are the Committee to understand that, in your Act, the schedule of tolls does not extend to the new lock that you have built?—No; because the lock is paid for by the next lock up the river. We take the toll at the next lock; we do not stop them at that lock to take the toll. We should take it, but we do not stop them; it is taken at the next lock.

1561. That is supposing they go up to the next lock?—If they do not go to the next lock they go through the free gates; that is free traffic. The bargemen know it perfectly well. They go up to the gates if they wish, but if they go up to the other lock they get a ticket for the 2 *s.*

1562. Mr. *Wilson.*] Then the question of the tide gates is given up; now as to the lock, is it not the fact that before that lock or those gates were placed there, that the whole of this place up to Temple Mills was within the tidal influence of the Lee?—Yes, and it is now.

1563. But before the lock was there, it was possible for any person to go to Mr. Measam's wharf on the head of the tide, and to come back with the tide, without any obstruction at Bow Lock?—I think that was so at spring tides, but at neap tides there was no water at all for anybody to leave; that is the difference. Now there is plenty of water.

1564. Do you now adhere to the statement that they could not do it at neap water?—Yes; on the 5th May 1852 a barge lay five days waiting for the tide; at the end of five days the new works were opened, and from that day there has been no stoppage at all, practically.

1565. Had not an accumulation of mud taken place?—No, that has nothing to do with mud. The mills were worked; the water was let down with a degree of force that there has been no stoppage ever since. The traffic of the river has never been stopped.

1566. I am reminded of the fact that that was in the year 1852, but the Bill was passed in 1850?—Yes, it took two years to make the works. The works were executed in about one year and three-quarters, or two years.

1567. Is it not the fact that the whole of the works were constructed, so as to make the Lee navigable above Temple Mill or above Old Ford Lock; was not that the main object?—It was to make a good through passage without detention for all the traffic going up the river.

1568. From the Regent's Canal?—No, from Limehouse.

1569. Was that measure of any benefit whatever to the parties occupying premises above Stratford who were within the tidal influence of the Lee?—It was of enormous benefit to them. The thing has altogether altered completely; at that time they could not work the level at all during neap tides. We so improved the river as to keep the water up, in fact, the whole thing has been altered.

1570. Are you not aware now that parties are actually detained who are not able to pass along, but who could do so upon the old system?—Certainly not; but there is an arm through which there is no through traffic, which is left in its natural state, and I dare say parties stick in that arm.

1571. Do you mean to state that the fact which I have suggested is not so?—Certainly not; during neap tides there is at least, on the average, three feet more water than there used to be; more than three feet.

1572. Is that of any benefit to these parties?—Yes, an enormous benefit. The state of things is perfectly different; barges come up and go away without any loss of time, whereas formerly it was proverbial among the long-shore men that if possible they would always avoid a freight up.

1573. Was not that state of things existing when the Act of 1850 passed?—Certainly; and the Act of 1850 improved it.

1574. The Act of 1850 distinctly stated that no barge was to pay for that accommodation which you say was so great?—You can read the Act for yourself; I have explained already the dispute.

1575. Were you not aware that the barge-owners consented to pay the sum, as you

you have stated, before the magistrates, because you always detained their barges so long at that lock that they thought that it was the least inconvenience of the two?—Because we could not let them go through Bow Lock, they wanted to go through without paying, but they have paid for it these 15 years.

1576. In spite of the Act of Parliament?—If it be in spite.

Re-examined by Mr. *Pember.*

1577. Has anybody ever been through this new lock at Bow Creek without paying?—No.

1578. On the other hand, what is called Bow Creek in this old Act of 1850 means those tidal gates?—There was no lock at all, there were tidal gates.

1579. The place was popularly known as "Bow Lock," was it not?—The place was called Bow Tidal Gates; but since I have made the lock it has been called Bow Lock.

1580. Then the tidal gates are still maintained?—Yes.

1581. Have you executed a number of works since this Act was passed?—Yes.

1582. You do not make them pay any toll in respect of those tidal gates?—No, we do not.

1583. What is the aggregate amount of tolls that you have received hitherto at your new lock?—It varies very much.

1584. I am told that it would be, perhaps, 1,000 *l.* a year?—No, it is not 1,000 *l.* a year at the new lock; I should think that the half-crowns that we have taken, would only reach to about 200 *l.* a year; when the works of the Metropolitan Board of Works were being constructed, we perhaps received 300 *l.* a year; whatever it is has gone towards the maintenance of the river.

1585. *Chairman.*] What is the charge above Bow Lock?—Fourpence a ton; the average tonnage would be from 13 *s.* to 14 *s.*

1586. Would this 2 *s.* 6 *d.* be in addition to that?—If they pay at the lock above, we do not charge them, it is charged in the next payment.

1587. Where do you see that; it is not in the Act at all?—They are liable to a toll of 6 *d.* per ton, if they go through the next lock.

1588. As this is drawn, it would seem to be an addition to that?—No; at all events that is not meant.

1589. That is not the intention of it?—No; the toll of 2 *s.* 6 *d.* is put upon the traffic going into what we call the free portion of the river, short of old Bow Lock; if the barges are going forward they get a pass; they pay on the average 13 *s.* or 16 *s.*

1590. It says, "for a barge or other craft passing through Bow Locks," it should be "and not through the other lock"?—And not through the other, Old Ford Lock or Bramley Lock.

1591. Mr. *Pember.*] Is this the position of things, that until you made your new lock at Bow Lock, you had no charge upon the tonnage at all?—No.

1592. But now if the barges elect to go through the tide gates, you still charge nothing upon the tonnage?—Nothing.

1593. And they do not pay until they get to Old Ford Lock?—Yes.

1594. If they elect to go through the other channel, you then make a new charge upon the tonnage, of 2 *s.* 6 *d.*?—They do not pay it in addition, they get passes.

1595. *Chairman.*] Whether it would be an addition to the existing tolls or not, that is the case?—If they declare for Old Ford Lock or for Bramley, at the Limehouse Cut.

The *Chairman* suggested that these words should be put in: "for a barge or other craft passing Old Ford Lock, and not proceeding beyond or through."

Mr. *Pember* stated that the proper phrase would be, "not proceeding beyond."

Mr. *Littler* then called the following evidence in opposition:—

Mr. *Henry Brown*, called; Examined by Mr. *Littler*.

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1596. WHAT are you?—A Lighterman and Barge-owner.

1597. You have known the works on the River Lee for many years, have you not?—I have.

1598. Did you know the River Lee before the Act of 1850 was passed?—I did.

1599. What was the condition of the river, at the lower part then?—We used to go up in our barges, and go to our destination the same as on the River Thames.

1600. It was a free river, in fact?—A free river; the Queen's highway.

1601. How was it at neap tides?—It was only rarely that we were short of water; the barges could easily get along, unless they were laden very deeply, or the men were unacquainted with the river. If the men were acquainted with the river, they could easily get up.

1602. Persons acquainted with the river did not find any material difficulty?—No.

1603. Since that time have you found any advantage arising from Mr. Beardmore's locks?—Yes, we find an advantage sometimes, and sometimes a very great disadvantage.

1604. What is the disadvantage you sometimes find?—When we think that the water is going to be kept up, we have our barges as we think in safety, but they sometimes set to and draw the water off, on account of some instructions which they receive, and then we are likely to be washed away. I believe that it rests with the water bailiff, and that if he gives instructions to draw off, they are obliged to comply.

1605. Have you been through the locks since 1850?—Yes, frequently.

1606. Have you ever paid?—I have paid, and I have not paid.

1607. You mean that sometimes you have, and that sometimes you have not?—Yes.

1608. Have they always claimed to make you pay?—They have let us come through at times without paying.

1609. Sometimes they make you pay, and sometimes they do not?—Yes.

1610. *Chairman.*] Do you mean that they sometimes pay for going through a lock, or going through the tidal gates?—A number of barges come up to the tidal gates. Occasionally the water is on the level with both the tidal gates and the locks, so that the gates are open, and the barges pass out on the level.

1611. Then it does not matter which you go through?—No.

1612. When the tide is lower, and you cannot get through the tidal gate, do you ever pass through the locks without paying something?—Not then.

1613. Which would you rather have, the use of the gates and pay 2 *s.* 6 *d.*, or be deprived of the gates and pay nothing?—So far as regards that, we should prefer to pay nothing.

1614. Which would you rather have, the use of this lock and pay 2 *s.* 6 *d.*, or not have the use of the lock, and be left to the tidal gates and pay nothing?—We should be able to get on as well if there were no tolls. The gates are constructed entirely for the benefit of the trustees, and for their own use; because, when they were competing with the railway, they were obliged to let the craft which takes their tonnage pass through. If, under those circumstances, they have had those gates put up, why should we have a toll put upon us to pay for them? We always got up the river with our craft before, and why should we not do so now? The trustees receive 11,000 *l.* for their craft going through, and therefore it is for their benefit. Why should not the water be kept up, without coming upon those parties who have small craft up and down the river? They ought to be satisfied with their long traffic.

1615. The question is this, whether you would prefer having the use of the lock and paying 2 *s.* 6 *d.*, or whether you prefer being left to the exclusive use of the tidal gates and paying nothing?—Leave us the use of the tidal gates, and then we shall know what we are doing.

1616. And pay nothing?—And pay nothing.

1617. You do not wish to have the use of the lock?—We do not require the lock; we are obliged to use horses occasionally now.

1618. The

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1618. The promoters have struck out from the Bill any charge for using tidal gates; what is your complaint now?—My complaint is that they are charging us for using that lock, which we do not require.

1619. Sir *George Bowyer.*] Then, why do you use it?—Because they keep the water up, and we cannot go out by those gates; they stop all traffic.

1620. *Chairman.*] You mean when you are above the tidal gate you cannot get out unless you are below it at the same level?—Of course not, they keep the head of water there, and say, now you shall not pass out unless you pay.

1621. How much have they raised the head of water below what it was in 1850?—They raise it sometimes higher and sometimes lower; they have constructed some new docks at Limehouse, and this head of water is kept up for the purpose of supplying those docks at Limehouse, from which they receive tolls, and therefore occasionally the head of water is drawn down. They are supposed to keep a certain head of water, but on account of the quantity of water which they use at Limehouse, they cannot do so.

1622. Has the head of water behind the tidal locks been kept up higher since 1850 than it was before?—Occasionally; that is for their own benefit.

1623. We understood you to say that when they do that they prevent your getting out into the river?—They do.

1624. Sir *George Bowyer.*] You cannot get out into the main channel?—No, they compel us to stop there and they make us pay; as soon as the tide begins to fall they close it and say now you shall pay us or else you cannot go out.

1625. Mr. *Powell.*] But they will let you stay there. Suppose you get to the tidal gates, there is a head of water above and low water below, so that you cannot get through, but you can remain in the lock above the tidal gates until the water rises; they will allow you to do that, will they not?—Yes; but suppose the water does not flow out into the River Thames, you must stop there or pay, and you may stop there for a week.

1626. Mr. *Littler.*] That is to say, except when the head of water behind the gates gets on a level with the Thames you are obstructed by their works?—We cannot get out.

1627. *Chairman.*] And before, you could get up and down with every tide?—Yes, the same as the River Thames.

1628. How much would it be worth your while, having the benefit of all the works, to pay?—There is no doubt at times we receive some benefit from it, and at other times we incur a loss; so that I believe, taking one with the other, we get no benefit from it. If the master bailiff sends instructions down to draw the water and open the gates, our property which we may have inside is liable to be washed away by these gates being open; if we knew when the tide ebbed and flowed we should, perhaps, be able to get out, but it is impossible for us to know whether the tide is going to ebb, or flow, or not, in consequence of not knowing when the master bailiff is going to issue his instructions.

1629. Mr. *Littler.*] As far as you are concerned, you would rather have the river as it is?—Yes.

Cross-examined by Mr. *Pember.*

1630. How long have you used the River Lee?—14 or 15 years altogether.

1631. You said just now that they kept up a higher head of water than used to be kept up before the passing of the Act of 1850?—Occasionally.

1632. Did you know the river before the Act of 1850?—Yes, I think I did.

1633. You have just told me that you have only used it for 14 or 15 years?—Yes; but I know it because I went up there with my father when a boy.

1634. How old were you?—Ten years old.

1635. Did you ever have to wait because there was a high head of water above the tidal gates at that time?—No; the water used to flow right up there the same as the River Thames.

1636. Were not the gates shut at high water?—No; they let them run out the same as the Thames.

1637. Was not there a mill head at that time?—Yes.

1638. Is it not the fact that the gates shut immediately the tide turned?—Yes.

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1639. Did not that keep up the head of water?—To a certain extent it did.

1640. Did you not have to wait till that went down?—Yes; the same that we have to do now.

1641. Are you not aware that with regard to those tidal gates, since the time you speak of in 1850, there was a new overshot made, for the express purpose of letting this head of water down?—That was because the water was required to supply the mills.

1642. Is not the effect of it to let the water down?—Only to the mills; to supply the water to the mills.

1643. Was not the effect of it to let the water down?—It let the water off for the use of the mills.

1644. You are what is called a Thames man, are you not?—I am a lighterman, and have been on the river all my lifetime.

1645. On the River Thames?—Yes, and on the creeks and inlets of the Thames.

1646. How often do you go as far as Old Ford Lock?—Sometimes twice and three times a week. For five years I used to be up there night and day.

Mr. *Littler* then addressed the Committee against the clause.

The *Chairman* stated that the Committee would proceed with the consideration of the clauses in the following order. They would in the first instance finish the question of tolls; they would then discuss the clauses relating to the Stort; then the clauses relating to Tottenham and West Ham; then the clauses relating to Mr. Cook; then the clauses relating to the storm outfall of the Metropolitan Board of Works; and then they would proceed to consider the remaining clauses with reference to Luton and Hertford, and the contribution by the water companies.

[Adjourned till Thursday next, at Twelve o'clock.

Thursday, 14th May 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Maxwell.
Mr. Benyon.	Mr. Powell.
Sir George Bowyer.	Mr. Surtees.
Lord John Hay.	Mr. Wise.
Mr. Alderman Lawrence.	

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

THE Committee proceeded with the further consideration of the clauses. 14 May 1868.

Mr. *Wilson* was then heard against the tolls proposed by the Schedule, and called the following witness:—

Mr. *John Meeson*, called; Examined by Mr. *Wilson*.

Mr. *J. Meeson*.

1647. You, I believe, reside in the neighbourhood of the town of Bishops Stortford, close to the Bow Lock?—I do.

1648. How long have you been acquainted with that lock, and the navigation of the Lee?—Between 20 and 30 years.

1649. I believe that up to the year 1854 it was perfectly free, and there was no question whatever raised about tolls?—Somewhere about that period.

1650. Do you remember the Act of 1850 passing, and the Lock being made in consequence?—I do.

1651. You have a wharf there?—Yes.

1652. And have barges coming up and down daily?—Yes.

1653. Do you consider that the alterations made in consequence of that Bill of 1850 have been, on the whole, of any advantage to you and other persons occupying premises in the same category with yourself?—Certainly not.

1654. You do not assent to what Mr. Beardmore has stated about the advantage that they are to you?—Certainly not.

1655. Do you remember that, from some time after the lock being completed there were no tolls whatever there?—It was free till that transaction of Carpenter's.

1656. Of course you were not present, but you remember generally that transaction?—His man passed down and broke a lock off the sluices, and he was given in charge for the destruction of the property of the River Lee Trustees; I know Carpenter himself appeared.

1657. After that did they demand some compensation for the passage through the lock?—They demanded 2*s.* 6*d.*, which we paid, rather than that our own men should be subject to be given into charge for destroying their property; that was for services rendered by their men in opening and shutting the gates.

1658. Did you for some time continue to make these payments?—Yes; we made those payments up to the year 1864, when they sought to raise the charge to 5*s.*

1659. You recollect that this proposition has been before Parliament since then?—Some years ago, subsequent to 1854, the River Lee Trustees came to Parliament with a Bill for imposing a toll of 3*d.* per ton upon persons using their new lock. I do not recollect the year, but I recollect the circumstances of the case; we opposed it by counsel, and after certain suggestions, seeing that the 45th clause was brought again before the attention of the Committee, the Bill was withdrawn.

Mr. *J. Meesom.*

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1660. Mr. *Rodwell.*] Was not the toll that you are speaking of a toll upon goods?—I am speaking of a toll sought to be imposed on barges passing through their new lock, of 3 *d.* per ton upon all goods. The trustees of the River Lee have obtained an Act since that, in which they did not seek to interfere with the tolls on our portion of the river.

1661. Mr. *Wilson.*] I believe another Act has passed in the interim, by which they did not seek to interfere with you?—No.

1662. What happened in 1864?—In the year 1864 they sought to make us pay a charge of 2 *s.* 6 *d.* every time we passed through, making a charge of 5 *s.* on each barge. We went before the Thames Conservancy, thinking our river was under their jurisdiction. They sought to make a compromise, that we should, whenever their men were employed in opening the sluices, rather than sending our own men down, pay them 1 *s.* every time we made use of their men, we having still the free use of Bow Lock as heretofore, that is, of passing whenever there was a level.

1663. And that plan has continued ever since?—That plan has continued ever since. But at that period, in order to carry out the threat mentioned in one of Mr. Marchant's letters, the trustees placed a boom to prevent our passing through these locks, which boom was, about two days afterwards, carried away by a barge, and has never been replaced since.

1664. In answer to Question 1512, Mr. Beardmore talks about a barge having been detained five days by the state of the tides before these things were done; did you ever hear of such a thing?—It may have been, and we are frequently so now.

1665. How is that?—Both from the drought and also the height of the bridges not allowing our barges to pass away.

1666. That has something to do with the river system, and which did not exist under the old system?—It would not.

1667. He told us about having spent a great deal of money in cleaning the river; can you give any account of that?

The *Chairman* stated that it was unnecessary to go into these details.

The *Witness.*] By the leave of the Committee, Mr. Beardwell stated that the trustees were spending more money than they were bound to do by this Act, but they were bound to make a sewer.

The *Chairman* stated that the Committee were fully in possession of Mr. Wilson's case.

Cross-examined by Mr. *Rodwell.*

1668. You object to pay this proposed toll in consequence of an exemption which is founded upon the Act of 1850?—We do.

1669. Do you think that availing yourselves of that, you ought to have the services of the River Lee Trustees' servants, and the benefit of the expenditure which they have made upon these locks for nothing?—They have taken away certain privileges, and the privileges which they give do not compensate us for the privileges which we have lost.

1670. What are the privileges that you refer to as having lost?—We had the flow of the tide, and at all states of the tide we could always depend upon our barges being able to come up; we could depend upon our barges coming up to our wharfs at certain states of the tide.

1671. Were you a party to this correspondence?—I was.

1672. Were you aware of the loss of privileges then?—I may state that I have been the prime mover in this matter all throughout.

1673. Do you think that 1 *s.* each way, or 2 *s.* for the return journey, is a fair charge to make?—We are willing to pay the trustees 1 *s.* when their men are employed; we say that that lock at certain times is entirely free, and whenever there is a level we have a right to pass through it free.

1674. You are aware that the word "tide-gates" is proposed to be struck out?—I am.

1675. What is to pay for the working of the lock?—The lock is placed open when there is a level.

1676. But

1676. But I suppose it does not open by itself?—Having opened it, you need not have men to keep it open; 30 or 40 barges will pass through at a tide, and we consider that those 30 or 40 barges ought not to pay anything.

1677. What is to pay for those locks?—They were not made to benefit us; it was for the traders up the river.

1678. The fact is, that 30, 40, or 50 barges can go through upon the level?—Of course, when two only go through at a time.

1679. If there is a crowd of 30 or 40 barges waiting to go through, they can go through?—So they could before.

1680. Supposing you are too late to get through on the level, can you avail yourselves of the lock?—When we come up with the flood, we used to pass through the lock.

1681. Is the lock an advantage to the traders or not?—It is a disadvantage rather than an advantage.

1682. Supposing you have no lock here, you would not be able to pass?—If you will place our river as it was regulated before you constructed those locks, I would much rather have that than have it as it is now.

1683. *Chairman.*] Is it the practice on the River Lee navigation for each barge to carry its own winch or key?—No, the lock-keeper locks all the sluices up. We are unwilling to place men of our own there, and are willing to pay the trustees 1 *s.* for the service rendered by their men; but we do not wish to have it imposed upon us by Act of Parliament that every time a barge passes through the lock we shall have to pay. They tried to place a boom across, but that was carried away, and has never been replaced.

1684. Mr. *Rodwell.*] Mr. Beardmore stated, "The combined result of this operation was, that whereas at neap tides barges could not move at all, and I have seen them for five days entirely fixed, the water-way was opened, and they have not been stopped since;" do you deny that?—I do.

1685. Do you deny that vessels have been stopped?—I say that barges are stopped now from scarcity of water in time of drought, and that barges are stopped as much now as they were then from the quantity of water which the different waterworks are allowed to take out of the river.

1686. Then you dispute Mr. Beardmore's statement?—I do.

1687. I believe it is an admitted fact that larger barges go through now than used to go through before these gates were placed there?—No, certainly not larger barges; I admit larger barges can pass through, but they have interfered with our privilege.

Mr. *Wilson* stated that he had other witnesses whom he might call.

The *Chairman* stated that it was unnecessary to call any further evidence, as the Committee understood what his case was.

Mr. *Rodwell* was heard in support of the tolls, as proposed in the Schedule.

The *Chairman* stated that the Committee were of opinion that this clause in the Schedule, "For a barge or other craft passing through Bow Locks or tide-gates, 2 *s.* 6 *d.*," be struck out.

The second Schedule, as amended, was then agreed to.

Mr. *Parkes* then proposed the third Schedule, which was agreed to, by the addition of the words, "River Lee Navigation Improvement Act, section 45, and River Lee Water Act, 1855, sections 73 to 83, both inclusive."

Mr. *Parkes* then proposed the fourth Schedule, which was agreed to, as amended, by the addition of the words "Enfield and Edmonton."

Mr. *Cripps* proposed the following clause on behalf of the Metropolitan Board of Works:—

"The Conservancy Board shall not in the execution of the provisions of this Act, stop up, or in any way interfere with any existing storm outlet from the main sewer, under the jurisdiction of the Metropolitan Board of Works, which at present discharge into the River Lee, nor in any other way interfere with, or have control over the works of the said Metropolitan Board, which are in any manner connected with the said River Lee, and

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that any work which may be proceeded with under the powers and provisions of this Act, and which may affect any of the works of the said Metropolitan Board, shall be done under the superintendence of the engineer of the said Metropolitan Board, and to his satisfaction; and the costs, charges, and expenses of these works and incident thereto, shall be borne by the said Conservancy Board."

Mr. *Parkes*, on behalf of the promoters, proposed the following clause in lieu of that proposed by Mr. Cripps:—

"This Act shall not take away, increase, diminish, or alter any right, power, or liability vested in, or attaching to the Metropolitan Board of Works, in relation to the storm outlet or outlets from the main sewers of that Board, or the discharge of water therefrom; but any such right, power, or liability shall remain as if this Act had not been passed; and any work under this Act which may interfere with, or affect any of the works of the said Metropolitan Board, shall be done under the superintendence of the engineer of the said Metropolitan Board, and to his reasonable satisfaction, and at the expense of the Conservancy Board,"

The room was ordered to be cleared.

After some time, Counsel and parties were called in.

The Committee inquired whether Mr. Pember wished to be heard against the clause.

Mr. *Pember* replied in the affirmative.

The *Chairman* stated that the Committee would hear Mr. Pember.

Mr. *Pember* was then heard against the clause.

Mr. *Cripps* was heard against the objection.

The *Chairman* stated that the Committee had agreed that the clause should stand as follows:—

"This Act shall not take away, increase, diminish, or alter any right, power, or liability vested in or attaching to the Metropolitan Board of Works in relation to the storm outlet or outlets from the main sewers of that Board, or the discharge of water therefrom; but any such right, power, or liability shall remain as if this Act had not passed; and any work under this Act which may interfere with or affect any of the works of the said Metropolitan Board existing shall be done under the superintendence of the engineer of the said Metropolitan Board, and to his reasonable satisfaction, and at the expense of the Conservancy Board."

Mr. *Michael* proposed the following clause on behalf of the Tottenham Local Board of Health:—

"Provided that, with respect to the sewage works of the Tottenham Local Board of Health, such Local Board shall, as soon as conveniently may be, and not later than the expiration of one year after the Conservancy Board shall have been completely constituted, provide additional depositing tanks and filter beds, and shall, by means of then existing works and of such tanks and beds, by the best known practicable means purify and disinfect the sewage matter passing through the said works; and after such purification and disinfection of such sewage matter as aforesaid, to the satisfaction of the Conservancy Board, or in case of difference between the Conservancy Board and the said Local Board, to the satisfaction of an arbitrator, to be appointed by the Board of Trade, on the application of either party, and so long as such purification and disinfection shall continue to the satisfaction of the Conservancy Board, or of the said arbitrator, the said Local Board may discharge the effluent water remaining, after such purification and disinfection as aforesaid, into the River Lee Navigation, through an independent outfall to be made therein by the said Local Board."

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Mr. *Parkes*, on behalf of the promoters, objected to the clause proposed by Mr. Michael, and proposed the following.—

"Provided that, with regard to the sewage works of the Tottenham Local Board of Health, such Local Board shall, as soon as conveniently may be, after the establishment of the Conservancy Board, provide additional depositing tanks and filter beds, and shall by means of their existing works, and the best known practicable means, purity and disinfect the sewage matter passing through the said works, as long as such purification and disinfection are effected to the satisfaction of the Conservancy Board, or in case of difference between the Conservancy Board and the said Local Board of Health, to the satisfaction of an arbitrator, to be appointed by the Board of Trade, on the application of either party, nothing in this Act shall authorise the Conservancy Board to give the said Local Board notice, requiring them to discontinue the discharge of the effluent water remaining after such purification and disinfection, into the Lee, through the outfall provided for the purpose by the said Board."

The *Chairman* inquired whether any other party wished to be heard against the clause?

Mr. *Wyatt* stated that he wished to be heard against the clause on behalf of the Conservators of the River Thames.

The room was ordered to be cleared.

After a short time Counsel and parties were called in.

The *Chairman* stated that the Committee had decided to hear the Counsel for the Conservators of the River Thames and the Trustees of the River Lee upon this clause.

Mr. *Pember* then addressed the Committee on the part of the River Lee, and called Mr. Nathaniel Beardmore, but before the examination of the witness was concluded, the room was ordered to be cleared.

After some time Counsel and parties were called in.

The *Chairman* stated that the Committee had determined that Mr. Pember was not at liberty to tender evidence, and that therefore the evidence given by Mr. Beardmore should be struck out of the proceedings.

The Committee inquired whether Mr. Wyatt wished to address the Committee upon the clause.

Mr. *Wyatt* replied in the affirmative, and that he wished to adduce evidence.

Mr. *Henry Reason*, called in; Examined by Mr. *Wyatt*.

Mr. *H. Reason*.

1688. I BELIEVE you live at Ware?—Yes.
1689. Are you a fisherman?—Yes.
1690. Have you been in the habit of fishing in the River Lee for many years?—Yes.

The *Chairman* inquired what points Mr. Wyatt proposed to examine the witness upon.

Mr. *Wyatt* stated that he proposed to examine the witness with reference to the discharge of the effluent water of Hertford into the river.

The *Chairman* inquired whether Mr. Wyatt proposed to tender evidence about the conservancy of the River Lee beyond the jurisdiction of the Thames, or merely as to the state of the River Lee where it flowed into the Thames?

Mr. *Wyatt* stated that he proposed to show that it would be very injurious to discharge effluent water into the River Lee.

The room was ordered to be cleared.

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After some time Counsel and parties were called in.

The Chairman stated that the Committee had decided that the Thames Conservators could not be heard upon the matters proposed by Mr. Wyatt.

Mr. *Wyatt* then addressed the Committee against the clause proposed by Mr. Michael.

Mr. *Michael* stated that the clause was drawn merely with a view of carrying out the decision at which the Committee had already arrived, and before the Committee decided upon rejecting the clause he claimed his right of adducing evidence in support of it.

The *Chairman* stated that the only question at present before the Committee was whether the proposed clause should be added to the Bill.

The room was ordered to be cleared.

After a short time Counsel and parties were called in.

The Chairman stated that the Committee were of opinion that the clause should stand part of the Bill, with the following proviso added to it:—

"Provided that the said Local Board of Health, with the sanction of the Board of Conservators, shall make, from time to time, such additional works as may be necessary for the purification and disinfection of any additional sewage from the district under the said Board, and that it shall be lawful for the said Board, with the sanction of the Board of Conservators, to dispose of the sewage of the said district in any other manner which they may deem more effectual for the purification thereof."

Upon the application of Mr. Littler the Committee agreed to take the case of Mr. Cook at the first meeting.

On the application of Mr. Sargood, the Committee agreed that the clauses relating to Luton should follow Mr. Cook's clause.

Friday, 15*th May* 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Maxwell.
Mr. Benyon.	Mr. Powell.
Sir George Bowyer.	Mr. Surtees.
Lord John Hay.	Mr. Wise.
Mr. Alderman Lawrence.	

ACTON SMEE AYRTON, Esq., in the Chair.

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The Committee proceeded with the further consideration of the clauses.

The *Chairman* stated that the Committee would consider the clause with reference to Messrs. Cook.

Mr. *Parkes* stated that the only form in which special provision could be made for Messrs. Cook, by the promoters, was the following:—

"Provided also, that if Messrs. Edward Cook & Co., of the East London Soap Works, in the parish of St. Mary-le-Bow, in the county of Middlesex, on receiving notice under this Act from the Conservancy Board to discontinue the flow or passage of sewage, or other offensive or injurious matter into the Lee from those works, require the Conservancy Board to construct a drain under the Lee, in order to enable the said Messrs. Edward Cook & Co. to comply with the notice, and any difference arises between the Conservancy Board and the said Messrs. Edward Cook & Co., with respect to the necessity for, or propriety of such drain, or the mode of construction thereof, or as to the question by whom the expenses thereof shall be borne, wholly or in part, then such difference shall be referred to and determined by an arbitrator, to be appointed by the Board of Trade on the application of either party, and the decision of the arbitrator shall be final, and the costs of the reference shall be in his discretion."

Mr. *Shrubsole* proposed the following clause on behalf of Messrs. Cook:—

"And whereas Messrs. Cook & Co., of the East London Soap Works, in the parish of St. Mary, Stratford-le-Bow, may, under this Act, be compelled to discontinue the discharge of sewage from their said works into the River Lee, to provide other means of drainage, involving the carrying of a drain under the River Lee, therefore the Conservancy Board shall, before giving notice to the said Messrs. Edward Cook & Co., under the section of this Act, either at their own expense, construct a drain under the said river, for the use of the said Messrs. Cook & Co., or at the like expense permit the said Messrs. Cook & Co. to construct such drain, and any difference which may arise between the Conservancy Board and the said Messrs. Cook & Co., under this enactment, shall be, from time to time, referred and determined by an arbitrator to be appointed, on the application of either party, by the Board of Trade, and the said arbitrator shall determine who is to pay the costs of such arbitrator."

The Committee adopted the clause read by Mr. Parkes.

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Mr. *Parkes* stated that the following clause had been agreed to by the Promoters and the Stort Navigation:—

"Where any money is payable under this Act, or any bye-law made thereunder, as a penalty or otherwise, by a corporation, board, body, or authority, the same shall be paid out of the borough rate, general district rate, or other rate of a general nature, leviable by that corporation, board, body, or authority who shall make and levy such rates as may be requisite accordingly; and if, in any case, any such corporation, board, body or authority fail so to do, then, without prejudice to any other mode of proceeding by any person or authority concerned, two or more justices may make an order appointing some person to be receiver, and to make, collect, and receive the whole or a competent part of the rates applicable in that behalf; and any receiver so appointed may make, collect, and receive such rates, and may receive and recover all arrears of such rates due, and may apply the same in discharge of the money so payable."

The Committee, after some discussion, adopted the following clause in lieu of the one just read:—

Funds out of which penalties recovered against public authorities are to be paid.

"The penalties recoverable under the provisions of this Act under the head or division 'Protection of Water,' and also all expenses and costs so recoverable from any corporate or other body, board, authority, or overseers for or in respect of any act or omission by them respectively, or any proceeding of the Conservancy Board in respect of any public sewer, drain-pipe, or channel shall be payable and paid out of the rates from time to time leviable by the respective corporate or other body, board, authority, or overseers for the purposes in respect of which they severally are authorised by law to levy rates."

Mr. *Parkes* then proposed the following clause, which was read and agreed to:—

Limits to conservancy of Lee and Thames.

"The jurisdiction of the Lee Conservancy Board shall not extend below, and the jurisdiction of the Conservators of the River Thames, shall not extend above, the south boundary stone."

Mr. *Stanhope* then proposed the following clause on behalf of Hertford:

"Provided always, that notwithstanding anything in this Act contained, the Conservancy Board shall not have power to stop up the outfall of the town of Hertford, so long as the provisions of The New River Company's (Hertford Sewerage Division) Act, 1854, and of The New River Company's Act, 1857, with respect to the sewerage of Hertford, are complied with."

The *Chairman* inquired whether Mr. Stanhope wished to adduce any evidence.

Mr. *Stanhope* replied that he only wished to prove that the provisions of the Act of 1854, obtained by the New River Company, with regard to the drainage of Hertford, had been complied with.

Mr. *Davison* stated that he would admit that on the part of the promoters the provisions of the Act had been complied with, but he wished to call evidence to prove that the result of the works was unsatisfactory.

Professor *Way* was then examined, and upon a question being put with reference to Luton, Mr. Sargood objected that it was not comepetent to the promoters to examine a witness with reference to Luton while the case of Hertford was under consideration.

After some discussion as to the course of proceeding, the room was ordered to be cleared.

After some time, Counsel and parties were called in.

The *Chairman* stated that the Committee had come to the following conclusion:—"That the promoters and the petitioners from Luton and Hertford

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Hertford and the New River Company, and the East London Waterworks Company, shall be at liberty to produce evidence respecting the clauses to be submitted to the Committee, and that they be heard thereon." The Committee thought that the two cases of Luton and Hertford had better be taken together, and therefore the Counsel appearing for those towns would have a right to cross-examine the witnesses called by the promoters.

After some discussion, it was ultimately arranged that Mr. Sargood should proceed with his case on behalf of Luton, and that Mr. Stanhope should proceed with his case on behalf of Hertford, and that the promoters should call their evidence; and that the evidence already given by Professor Way should be transposed to the commencement of the case of the promoters against the clauses proposed on behalf of Luton and Hertford.

Mr. *Sargood* then proposed the following clauses on behalf of Luton:—

"Nothing in this Act shall operate or extend to prevent the chairman and members of the township of Luton Local Board of Health for the time being, or the inhabitants of the said town, from taking the water of the River Lee for all purposes which may be by them deemed necessary for promoting and maintaining the health, comfort, and cleanliness of the said town of Luton and the inhabitants thereof."

"Nothing in this Act shall operate or extend to prevent such chairman and members of the said Luton Local Board of Health and the inhabitants of the said town from maintaining, continuing, and extending their present system of sewerage and drainage works in the said town, or from discharging into the said River Lee the sewage water or matter flowing from any sewers or drains after such sewage water or matter has been subjected to the process of purification known as Higgs's process, in pursuance of the conditions enjoined upon them by the writ of injunction awarded against them by and out of the High Court of Chancery, on the day of 1858, in a suit wherein Her Majesty's then Attorney General at the relation of John Shaw Leigh, Esquire, was informant, the said John Shaw Leigh was plaintiff, and the township of Luton Local Board of Health were defendants."

"Provided always, that it shall be lawful for the chairman and members (for the time being) of the Luton Board of Health, with the consent of the said Lee Conservancy Board, to substitute for so long as they think fit, any other system of drainage, sewerage, or deodorising, or filtering works, such consent to be signified in writing under the common seal of the said Conservancy Board."

Mr. *Owen Williams*, called; Examined by Mr. *Sargood*.

Mr. *O. Williams*.

1691. I BELIEVE you are Chairman of the Luton Local Board of Health?—Yes.

1692. What is the present rateable value of Luton?—£. 48,000, the town, in round numbers.

1693. Can you tell me the aggregate number of houses which are rated?—About 4,000.

1694. You have it a little more accurately than that, have you not?—I have not the gross quite accurate; it is just a shade under 2,000.

1695. How many of those houses are over 50 *l.* a year?—Ninety-two.

1696. How many are there between 12 *l.* and 50 *l.* a year?—About 220, I think it is.

1697. Are the remainder under 12 *l.* a year?—£. 12 and under; of those there are 2,700.

1698. What is the gross amount of rating upon the town at the present moment?—Do you mean the rating or the rateable value?

1699. How much in the pound?—Just 1 *d.* under 6 *s.*

1700. Is about half of that due to the local Board for its purposes connected

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with purity, health, lighting, and so on?—Rather more than that; the local Board's rates are 3 *s.* 2 *d.* in the pound, to the best of my recollection.

1701. So that your rates now amount to about 14,000 *l.* for the town of Luton?—Yes.

1702. The bulk of the houses being under 12 *l.* a year, tell me what is the character of the inhabitants of them generally, or rather their occupation?—They are inhabited principally by the persons who make the straw goods, hats and bonnets.

1703. Assuming that they have got work to do, what is about their average wage per week?—The girls, in an average season, taking the year through, may earn 10 *s.* a week, and the men may earn 18 *s.* per week, the blockers; but that is not the entire proportion of the town; that is the manufacturing portion.

1704. Taking Luton as a whole, do you consider it over-rated at the present moment?—We are rated as much as we can bear, especially in the present depressed state of the trade.

1705. To what extent have you exercised borrowing powers in the town?—£. 29,000 *l.*

1706. Have you any power to go beyond that, as at present advised?—I believe not; that is about two-thirds of our rateable value.

1707. For what purpose?—For the Board of Health's purposes entirely. I have not spoken of the borrowing powers which have been exercised by the Board of Guardians.

1708. Mr. *Surtees.*] I suppose a great part of your expenditure is on these lime works and the purification of the sewage?—Half of that has been expended on the deodorising works and the intercepting sewer in connection with them.

1709. Since you have pursued that practice, have you got into disgrace, to use my friend's term, with any one, for anything you have done to the river?—Not at all.

1710. So far as you can see, every one interested in the matter appears to be satisfied?—None has made any objection that I have heard of.

1711. What does it cost you a year for your general outlay?—£500 a-year.

1712. Sir *George Bowyer.*] You get about 90 *l.* a-year by the sale of your sewage, do you not?—Yes.

1713. Mr. *Sargood.*] You have a net loss of 500 *l.* a-year from sewage?—Yes, that is so.

1714. If those who are to derive an advantage from the purity of water fancy they can make a profit out of the sewage by some other means, I suppose you would be very glad to give it up to them?—Very glad indeed, because it would save us 500 *l.* a-year.

1715. You do not see your way clear to make any profit?—We do not, or we should readily take steps to do so.

Cross-examined by Mr. *Wilkinson.*

1716. Of course you would be very grateful to any parties who would take your sewage and apply it to irrigation purposes, if they could make a profit for you?—I think I may safely say that the town would not object to any parties coming and taking the sewage away from them at their own expense.

1717. Did you hear Mr. Rawlinson's evidence, that irrigation was a cheaper process than that which is now adopted?—I did.

1718. Do you agree with him?—If the sewage does not require to be lifted or pumped up, there is no doubt that it may be a paying process, but as we should have to lift it a considerable distance before we could put it on the land to irrigate with it, it is my opinion that the additional cost or expense of lifting the sewage would absorb all the profits that would be made by the extra produce on the land.

1719. Then I may take you to admit that, except for the extra expense of lifting, you do think that irrigation would be the cheaper process of the two?—I have no experience on that point.

1720. So far as you are qualified to form an opinion, if you will give me the benefit

benefit of the same experience as you gave my learned friend when he asked you the questions which you answered for him, I shall be satisfied?—I beg your pardon, I did not catch your question.

1721. I understood you to say that, except with reference to the extra expense of lifting sewage, you do, so far as your experience extends, agree with Mr. Rawlinson in his opinion that irrigation is the cheaper process of the two?—I have not said so.

1722. I understood you to say so. What did you say with regard to the substitution of irrigation for the present process?—I stated that, in our circumstances, the additional cost of raising sewage would absorb any increased profit that there might be from spreading sewage matter over the surface.

1723. At present it costs you 500*l.* a-year?—Yes.

1724. Therefore you lose that?—Yes.

1725. You sell the solid precipitate?—We do.

1726. Do you find any difficulty in selling that?—Not latterly; farmers are now beginning to appreciate it a little more than they used to do formerly.

1727. What price do you get for it?—About 2*s.* per cubic yard.

1728. I understand that you would be glad to give up the present system, which involves a loss of 500*l.* a-year, if anybody can show you a plan of irrigating with profit?—No; I do not say so.

Mr. *Sargood* remarked, that the witness stated that he would do so if anybody would take it at their own expense.

1729. Mr. *Wilkinson.*] Will you answer my question, if you please?—Speaking for myself, as a matter of opinion, I do not think that there would be any objection to any individual body or person coming and taking our sewage away from us, at their own expense. I do not think the town would object to it.

1730. Are you aware that several such plans have been already suggested?—I am aware that plans for irrigation have been suggested.

1731. Have you considered them yourself?—I have looked at the Croydon irrigation plan several times; but Croydon appears to be situated on the top of a hill, and therefore there is no difficulty in spreading their sewage.

1732. Has your attention been called to the plan devised by Lucas & Co. at Stroud?—It has not.

1733. Have you not seen that plan?—I have not.

1734. Have you seen any other plan than that to which you refer at Croydon?—No, I have not seen any other plan.

1735. What is your objection to the Croydon plan?—Being situated on the crown of a hill, according to the plan that was shown to me, the sewage flows by natural gravitation from the town into the land below.

1736. Croydon, you say is situated on the crown of a hill, is not Luton similarly situated on the crown of a hill?—In the valley between the hills.

1737. Luton itself is situated very much in the same position as Croydon is situated, is it not?—Luton is in the valley entirely, and the river runs down the centre of the town.

1738. Will you explain to me the difference in the relative positions of Croydon and Luton?—The plan shown to me of the Croydon works, by Mr. Latham, appears to show the town of Croydon upon the crown of a hill and the sewage works away from it.

1739. Is your evidence as to Croydon given simply upon an inspection of the plan which has been shown to you, or have you seen the place?—From the plan of Croydon.

1740. Have you seen the place itself?—I have not.

1741. Taking it from me, that the position of Luton is similar, that is to say, it is situated in a valley surrounded by hills?——

Mr. *Sargood* objected to the question.

1742. Mr. *Wilkinson.*] What means have you of knowing the position of Croydon?—None at all.

1743. Taking from me the fact that Croydon is in a situation precisely similar to

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to Luton, what objection occurs to you for doing at Luton what has been done at Croydon in irrigating the land?——

Mr. *Sargood* renewed his objection.

The *Chairman* stated that answers to hypothetical questions were not of much value.

1744. Sir *George Bowyer.*] Do you know what the expense of pumping would be at Luton?—I have formed an opinion that it would cost at least 1,000 *l.* a year; that is my impression.

1745. Your impression?—That is my calculation.

1746. To raise it how high?—To raise it up 150 feet.

1747. *Chairman.*] You are not an engineer?—Certainly not.

1748. Mr. *Wilkinson.*] Do you really know anything practically as to the cost of lifting sewage?—Only by reading the engineers' tables, and the books which are published on the matter. I have read them, and therefore by them I form my opinion.

1749. Are you aware of the evidence given by Mr. Rawlinson, that to raise 6,000 tons of sewage 50 feet would cost 16 *s.*?—I heard him say so.

1750. Do you agree with that?—I cannot contradict him, but I do not agree with him.

1751. All you know is from what is published in the tables of engineers?—Exactly.

1752. Do you know anything about the increase in the value of land which has been occasioned by the application of irrigation?—I do not know it personally; I have only read it in the reports which have been made upon the subject.

1753. When was this system that you have referred to as Higgs's system first introduced at Luton?—I think it is 10 or 12 years; it has been given in evidence, but I really do not remember.

1754. You told my learned friend that after that system had been adopted, to use his own expression, you got into no disgrace?—Exactly.

1755. How is that; is that answer of yours consistent with all this body of evidence, with which I will not fatigue the Committee, which was taken on the examination by the Commissioners at Luton?——

1756. Mr. *Sargood.*] Have you read the whole body of that evidence?—I have read most of the evidence, and nearly every witness says that the water from Luton is as pure as need be.

1757. Mr. *Wilkinson.*] As pure as it need be?—Yes; I think you will find that over and over again. I have not the report with me.

1758. Mr. Kit Thompson, for instance?—He was speaking in his evidence of well water in a small district, just outside the town of Luton.

1759. I do not find that in his evidence?—He was speaking of a small district, just on the outside of the township of Luton, in his evidence, relating to some well water, over which the Board of Health have no control.

1760. I should like you to direct me to the part in his evidence in which he gives that particular fact, because I cannot find it. Have you read the evidence of Mr. Willis, of Luton?—I know Mr. Willis.

1761. Do you agree with him as to the injurious results?

Mr. *Sargood* stated, that he must ask Mr. Wilkinson to read the words of Mr. Willis if he asked the Witness whether he agreed with his evidence.

The *Chairman* stated that all the evidence was before the Committee, and the learned Counsel might call attention to any parts when they addressed the Committee.

1762. Mr. *Wilkinson.*] Let me ask you this general question. You say this scheme was introduced many years before this evidence was taken by the Commissioners at Luton?—Just so.

1763. Has anything occurred since the Commissioners took that evidence to alter the state of matters in Luton in the year 1866?—Nothing whatever has been added since; there has been no occasion for it. I brought up some water this morning, which was quite bright.

1764. As regards the trade of Luton, is it not the fact that it is increasing?—It is the fact that it is decreasing; and I am afraid leaving us altogether.

1765. Has that gone on since 1866?—It is from 1866, because ladies have changed the fashion of covering their heads.

1766. My friends have asked you some questions about the number of houses under 12 *l.* a year at Luton; I did not quite see the connection that that has; I presume the poorer the people are, it is almost equally essential still that the water should be purified for them?—They have all got pure water.

1767. Your answer is upon the assumption that they have already got pure water?—They have got a pure water, unquestionably, in all parts of the town.

1768. Supposing that they have that pure water themselves, is their poverty any reason why they should be permitted to contribute to the pollution of the river, so far as other people are concerned?—They ought not to be called upon to provide pure water for the New River to sell to London.

1769. Just a word upon the addition to the rates; if you be satisfied that the process of irrigation is really a cheaper process, of course that would be a benefit to the poor of Luton?—It would be, if it were so; but I have no proof that it would be.

Mr. *Denison* proceeded to cross-examine the witness on behalf of the New River Company.

Mr. *Sargood* objected to his doing so.

The Committee decided that Mr. Denison was at liberty to proceed with his cross-examination.

Cross-examined by Mr. *Denison.*

1770. You gave an answer which astonished me a little; you said that you ought not to be called upon to provide pure water for London; has it occurred to you that if you did not turn your dirt into it the water would be pure?—We have a prescriptive right to turn our mixed water and our sewage water from time immemorial into the river.

1771. If that is so, how came that injunction to be granted?—Because we were turning rather more sewage water into the river than we had originally done.

1772. Then your prescriptive right was to turn a certain quantity of dirt into the river?—Decidedly.

1773. Have you done all the drainage and water-closet business that you are going to do?—We have done all the drainage that is required for the town, according to its present size.

1774. That was not the question I asked; I asked you if you had done all the drainage and water-closet business that you are going to do?—I think I may say "Yes," in answer to that.

1775. Then the Committee may understand that you are not going to do any more purification for Luton than you have done at present?—We do not need to do any more; our water is pure.

1776. Is the whole of the town drained into the river?—Entirely.

1777. And the population is what?—About 20,000.

1778. Twenty thousand people turn the whole of their sewage water into the river?—Yes.

1779. Will you be kind enough to tell me how much dirt you consider you had a prescriptive right to turn in?—I cannot answer that.

1780. You tell me that you had a prescriptive right to turn in some dirt, but unfortunately the Court of Chancery has stopped you; I want to know what quantity of dirt you have a prescriptive right to turn in?—I cannot give an answer to that.

1781. You leave it rather to other people to determine whether the water is the worse for what you do to it?—We believe that we have a right to allow our natural surface water to flow into the river, the storm water.

Re-examined by Mr. *Sargood*.

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1782. Mr. Denison wished you to say what quantity of dirt you have a prescriptive right to put in; would this be an answer to that question: Just as much dirt as may be contained in your effluent water after it has been subjected to the process of purification known as Higgs's process?

Mr. *Denison*.] How can that be a prescriptive right, Higgs's process being only 10 years old?

Mr. *Sargood*.] It will be just as much as is contained in the sewage water, after being subjected to the process which the Court of Chancery enjoined?

Witness.] That is all we ask for.

1783. However valuable the sewage may be for irrigation, and however profitable it may be, has it ever happened to the Luton Board that anybody has proposed to take it off your hands?—Certainly not.

1784. Sir *George Bowyer*.] You are aware that Higgs's process diminishes the value of sewage for irrigation purposes or for agricultural purposes?—I believe it does, to a certain extent, injure the solids.

1785. *Chairman*.] Has any change been made in the works or management of them during the last few years?—Oh dear no, not any.

1786. They are going on exactly in the same way as they were commenced?—Yes.

1787. Mr. *Powell*.] They stand exactly as they were reported to stand to the Commissioners?—Yes.

[The Witness withdrew.

Mr. *William David Sandoe*, called; Examined by Mr. *Sargood*.

Mr. *W. D. Sandoe*.

1788. You are an architect, residing in the town of Luton, I think?—I am Surveyor to the Local Board of Health; I am not an architect.

1789. I think we are indebted to you for two samples of the water; one is a sample of the actual effluent water sent out from the works?—It is.

1790. That is No. 1, and the other is taken at some bridge, is it not?—At the junction with the River Lee.—(*The witness produced two small bottles of water*).

1791. How far is that from where you put the water in?—About a quarter of a mile, as near as possible.

1792. Before I venture to tender these to the Committee, just take the water itself as it comes from the sewage, is that free from any odour?—I believe so; it usually is.

1793. Just give us your practical experience of that?—(*After uncorking the bottle and smelling the water.*) I cannot smell anything in it.

1794. *Chairman*.] When was that drawn?—Nine o'clock last night.

1795. Mr. *Benyon*.] From below the outfall?—That is the water that passes from the works. The water passes a quarter of a mile from the point where this is taken before it reaches the River Lee.

1796. Mr. *Sargood*.] Sample No. 2 is, after it has come in contact with the River Lee, deriving the advantage from that marriage to the extent of about 100 yards, is it not?—About 20 yards.

1797. I need not ask you if there is much smell in that. Take the cork out. I am going to do a rash thing, which I do not know whether I am right or wrong in proposing; have you a mind to taste it?—I have no objection to taste this.

1798. With regard to this, it has had a run of 20 yards to the river; have you any objection to tasting it?—None at all. (*The witness drank some of the water*).

The *Chairman* stated that the real point in contention was as to the quality of the water after leaving Mr. Leigh's park, and inquired whether there was any sample of the water after it left Mr. Leigh's park.

1799. Mr.

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1799. Mr. *Sargood.*] Is this before it leaves Mr. Leigh's park?—Certainly; it has an area of about 60 acres to pass over through Mr. Leigh's park.

1800. Having tasted it (and I will not venture to ask any one to challenge your taste), do you taste anything unpleasant in it?—Not in the slightest degree. Below the park it is drunk by the whole of the inhabitants.

1801. How far has it to run after you have discharged it in the No. 1 state, before it has reached the intake of any one of these companies?—Hertford is the nearest; it would be somewhere between 15 and 20 miles.

1802. Sample No. 2, a portion of which you have drunk, is only 20 yards from the actual mouth of the pipe of the sewer?—That is so.

1803. Do you know anything about the effluent water that comes from Hertford; is that within your personal experience?—I saw it some five or six years since.

1804. Taking it sample for sample, which do you prefer?—I prefer the Luton.

1805. You prefer the Luton to the Hertford?—Certainly, for this reason, that the water passing through the works at Hertford goes through so very rapidly that it has not sufficient time to purify. In the case of Luton, we retain our water from four and a half to five hours ordinarily.

1806. What does Hertford do?—It would not be more than an hour passing through.

1807. Then that, in your judgment, would have the effect of putting the quality of your water above Hertford, without attempting to depreciate Hertford?—It is continually in circulation.

Cross-examined by Mr. *Davison.*

1808. You stated, I think, that you are the surveyor to the Board?—Yes.

1809. You are not a chemist, I believe?—No, certainly not.

1810. How many samples have you brought with you?—Two.

1811. Were they taken at the same place?—Certainly not; one was taken at the actual works before it passed Hertford from the works, and the other about a quarter of a mile before it entered the Lee.

1812. What time did you take the water?—About half-past eight, I took the one at the works.

1813. In the morning, or at night?—At night, and I took the other as soon as I could get to it.

1814. I see you were examined before Mr. Rawlinson and the other Commissioners, and you stated at that time that your Board had not had an analysis made for some time?—Not to my knowledge.

1815. Have you had any analysis made now?—Not that I am aware of.

1816. Although your attention was drawn to it?—Yes.

1817. You have been here during the inquiry?—Yes.

1818. You have had no analysis whatever made?—No, I did not think it necessary.

1819. You do not know much about this yourself; you do not put yourself forward as an authority upon this?—No, I do not profess to be a chemist.

1820. Mr. *Sargood.*] I suppose it would cost you something to have an analysis made of it?—There is no question about that.

[The Witness withdrew.

Mr. *John Higgins*, called; Examined by Mr. *Sargood.*

1821. WHAT are you?—I am a Plumber and Pump-fitter.

1822. Then you know something about pumps?—Yes.

1823. The quantity of sewage per day which I think we get from Luton is 450,000 gallons; have you made any calculation as to what it would cost to pump that?—Yes; I calculate that we should require two stationary engines and six 8-inch pumps; and to drive them, without reckoning anything for the cost of the plant, would certainly, I think, cost upwards of 1,000 *l.* a year, as far as I saw it.

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1824. Supposing you incurred that expense, do you know where you are to pump it to at this moment?—No.

1825. *Chairman.*] How high will it have to be pumped?—One hundred feet.

1826. Mr. *Wilkinson.*] Do you know of any place accessible to Luton on to which they could pump it even if you had a pump?—I think they might at 100 feet; I am not certain about that. I think there is a tract of land which we might irrigate with it if it were pumped at 100 feet.

1827. If you were to double your expenditure, you think there is just a chance that you might be able to find some land?—I think so. I am not an agriculturist, but I think so.

Cross-examined by Mr. *Davison.*

1828. You have calculated that if you pumped at 100 feet you would be able to irrigate the land?—I think we should; that would have to be estimated.

1829. You make pumps at Luton?—I fix them; I am not a brassfounder. I fix Warner's, Taylor's, and those kinds of pumps.

1830. Where at?—At Luton.

1831. Have you ever fixed any pumps for the purposes of irrigation?—Not for the purpose of irrigation, but I have had, of course, to calculate what pumps will raise, and what heights they will raise, and the strain put upon them. The pumping of sewage is a more difficult thing than the pumping of water.

1832. You have never pumped any sewage, nor have you made any pumps?—I have seen pumps pumping sewage.

1833. Not your own?—Not my own.

1834. Were they eight-inch pumps?—Yes.

1835. Where was that?—I took Haywood and Tyler's tables.

1836. Tell me where you have seen one eight-inch pump pumping sewage?—I did not mean that it was exactly eight inches. We have a pump at our deodorising works pumping sewage.

1837. Is that an eight-inch pump?—I have not measured it to be eight inches.

1838. I do not want to depreciate the value of your experience, but would it not be a great deal better to have one large pump, than to have six eight-inch pumps?—I think it is impossible to do with one large pump.

1839. What is the largest pump you have ever made?—I fix pumps; I do not make them. They are generally made by some London firm, like Warner's.

1840. Have you seen the West Ham pumps?—No.

1841. If I tell you that they are 48 inches in diameter, have you ever seen anything like them?—They generally lift a small way.

1842. You prefer six times eight?—I prefer six times eight if it is to be elevated to a great height.

[The Witness withdrew.

Mr. *Sargood* stated that he would not trouble the Committee with any further evidence.

The *Chairman* inquired if Mr. Stanhope wished to call any evidence with regard to Hertford.

Mr. *Stanhope* stated that he did not wish to call any evidence if the Committee were satisfied that the provisions of the New River Company's Act of 1854 had been complied with.

The *Chairman* reminded Mr. Stanhope that that fact had been admitted by the promoters.

Mr. *Stanhope* thereupon stated that he did not wish to call any further evidence.

The *Chairman* then stated that the Committee would now hear the promoters against the clauses which had been proposed on behalf of Luton and Hertford.

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Mr. *Davison* stated that, with the permission of the Committee, he would call his witnesses first, and address the Committee afterwards.

The Committee acquiesced in the course proposed.

Professor *John Thomas Way*, called; Examined by Mr. *Wilkinson*.

Professor *J. T. Way.*

1843. In the course of your inquiries upon the Rivers Pollution Commission, you held a sitting at Hertford, I believe?—Yes.

1844. On that occasion you examined witnesses as to the mode in which the sewage was dealt with there?—Yes, we did.

1845. You then ascertained that it was dealt with under a system which is called "Higgs's system?"—Yes.

1846. That is a system known as the lime process, which consists of simply separating, by the application of lime, the solid from the liquid matter?—Yes; lime is an essential ingredient; I believe they use chloride of lime as well.

1847. Will you state to the Committee your opinion as to the sufficiency of that system for purifying water?—The system of intercepting sewage by lime if properly carried out clarifies the water, and leaves it clear and without offensive smell or appearance; but it removes only or principally the matter which is already in suspension, and which otherwise cannot be separated. It is in fact the means of clarifying in the same way in which you would clarify coffee with the white of eggs.

1848. Sir *George Bowyer.*] It precipitates the solid matter?—Yes; but not the matter which is in solution; only the matter which is in suspension.

1849. In fact it has no chemical effect?—It has a chemical effect by which a mechanical effect is produced; the lime neutralises the sulphate of lime, and causes a precipitation which separates the other precipitates. It does not remove any of the matters which are in solution of an objectionable kind, such as the urinary matters. The larger portion of the excrements is in a soluble state in the urine, that is to say, although the fœces are, so far as we can judge, the only insoluble matter in the excrements, liquid and solid, of a population which really are not the largest population, the urine contains a larger quantity of true solid matter than the fœces. There are at least six or seven parts out of ten of the total solid matter which are soluble and in solution, and which are not removed by the lime process. The most objectionable parts of the sewage are in the liquid, which are not removed.

1850. Mr. *Wilkinson.*] Having reference to the proportion of solid matter and liquid matter, would it follow that the lime process would only very partially relieve the river from the impurity of sewage?—Yes. The Committee will allow me to make that matter entirely straight, so that I may not be misunderstood. There are two classes of objections to sewage, one is in the nastiness of the appearance and the smell; and there is besides that hidden objection, so far as the use of the water for domestic purposes into which sewage is poured is concerned. You may make sewage, as you do by the lime process, very fairly clean, so that it may be thrown into the river, if that water is not going to be drunk; but it does leave behind matter of a most objectionable character if the water is going to be used for drinking purposes. I make the clearest distinction between those two things; that you cannot purify efficiently sewage by any process of precipitation which is thrown into drinking water.

1851. Sir *George Bowyer.*] Not by Higgs's process?—Not by any process that I know.

1852. Could it be done by sewage irrigation?—Yes; I consider that sewage irrigation stands quite apart from any intercepting process.

1853. Mr. *Wilkinson.*] At present you are confining your attention to the mode adopted at Hertford?—Yes.

1854. There has been some evidence given before this Committee as to the value of the precipitate which is obtained by adding lime to sewage; I think it has been stated to be worth 2 *s.* per ton?—It does not pay its expenses.

1855. Would you not find in that very fact a confirmation of the insufficiency of the process, so far as regards the cleansing of the impurities?—Clearly. I think the matters which form the manure are the very matters which you want to keep out of the water, but you do not keep them out.

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1856. The very substances which would be valuable for manure are those which foul the water?—Yes.

1857. In fact, the worthlessness of the precipitation shows the worthlessness of the system?—Yes; the matters in sewage are very valuable manuring matters, therefore if you remove any by the act of precipitation you would have a valuable manuring substance, but the fact is that you have not.

1858. Do you consider the lime process as a palliative, and not an efficient remedy?—I think that in many cases it might be useful and adequate, but I do not think it is adequate where the water has to be used for domestic purposes.

1859. In the course of the evidence taken before this Committee, we have had a statement made by Professor Rawlinson with reference to the amount of sewage which was removed by the process adopted at Luton. I think he stated that 9-10ths of the impurities were removed; have you any explanation to offer with regard to that?—Of course I cannot say what Mr. Rawlinson meant, but I am quite sure, from the knowledge I have of his opinion, having been associated with him so long in the Rivers Commission, that he did not mean there to imply that 9-10ths of the matter in solution were taken out of the water by that process. He must have meant that 9-10ths——

Mr. *Sargood* objected to this witness stating what another witness meant.

The Committee allowed the objection.

1860. Sir *George Bowyer.*] Will you state your own opinion upon Mr. Rawlinson's opinion?—Undoubtedly I should contradict that, point blank. I was surprised to hear Mr. Rawlinson say it. I think there must have been a misapprehension of some kind. It is not the fact. Injurious matter is taken out of sewage by the lime process, no doubt, and a very large proportion of the objectionable character of the sewage is removed, but the liquid may be perfectly bright, and without smell, and may contain matters exceedingly injurious to health.

1861. Mr. *Wilkinson.*] Do I understand you to state, that the 9-10ths applies to the open, palpable offensive matter, but not to the matter in solution; you do not concur in the evidence given by Mr. Rawlinson, as to the 9-10ths being removed, except with the explanation that you now offer of that to the Committee?—Just so.

1862. With regard to your own experience of the liming process, you have already told us that it is not, in your judgment, sufficient as a remedy?—No, I have been acquainted with these processes for many years, and my view of the matter has always been what it is at the present time, that the water may be purified so far for many of the ordinary purposes of water, that is to say, for boating, or even fishing by these processes, so as to become unobjectionable, or comparatively unobjectionable, but it is not safe to trust to such water for drinking.

1863. *Chairman.*] Do you mean it would not be safe to drink the water flowing from the outfall of the sewage?—No; that water, after mixture with other water——

1864. Let us really have this made clear. If you do not mean that it would not be safe to drink the water when it comes from the outfall, under what conditions would it be safe? because, as far as we have before us, the evidence tendered by the promoters, I think, 1,200,000 people have been drinking this water for a great many years without any inconvenience, therefore the point of safety and the want of safety had better be cleared up by your evidence. If you do not mean the outfall, where is the point at which it becomes unsafe?—If I am asked to say that the water of the East London Waterworks, for instance, is water that is proper to drink, although a large quantity of sewage is thrown into it, I say that undoubtedly it is not so fit for drinking as it would be if the sewage were entirely removed from it, and it may, under certain circumstances, be objectionable on account of health.

1865. The evidence that we have before us is, that the New River Company's water is not only safe but is extremely good water to drink?—Yes.

1866. Your evidence would not be that it is unsafe to drink the water of the New River Company?—No; pardon me, I do not think it goes to that length. I say that if it is a question of purifying water, the system of purifying it will only

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only attack one portion of the evil. I do not wish to impugn the purity of the water of the New River Company or the East London Company. On the contrary, I say the New River Company's water is exceedingly good water; but it is not right (I will leave out the word "safe") that sewage should go into that water.

1867. I only wish to call your attention to the effect of the word "safe," which you used; it might become a very important matter if 1,200,000 persons are not safe in drinking the water which they at present do?—I do not go to that extent.

1868. Mr. *Wilkinson.*] Brightness and smell are no sufficient tests?—No.

1869. Do you see any reason why the same provisions which were thought necessary for the protection of the Thames Valley, should not be equally applicable to the valley of the Lee, so far as the discharge of sewage into the river is concerned?—So far as it affects the water supply question, certainly.

1870. The Thames Navigation Act, we have learned, was confined to a distance of three miles; was that in consequence of its being considered a sufficient extension of the intervening purification?——

Mr. *Sargood* objected to the question, upon the ground that the Witness could not tell what was in the minds of the Committee.

Mr. *Wilkinson* stated that, so far as the report was concerned, the Witness would know whether or not it was an incomplete system.

The *Chairman* stated that the report would speak for itself, and if the learned Counsel wished to call the attention of the Committee to any parts of it he would be at liberty to do so in his address.

1871. Mr. *Wilkinson.*] Do you know this fact; was there an inquiry made into the tributaries of the Thames Valley?—By the Commission of which I was a member.

1872. Yes?—No, there was not.

1873. Why not?—Because there was a Bill before Parliament on which it was necessary to have our evidence with regard to the main river.

1874. *Chairman.*] The main reason was this, was it not, that the Commission could only do one thing at a time, and that after they had inquired into the Lee they went to another river?—Yes.

1875. Mr. *Wilkinson.*] Was it because there was not sufficient time that that limit was made of only three miles?—We had no knowledge of the tributaries sufficient to recommend that they should be reported upon.

1876. Is it in your judgment necessary, to carry out the provisions of this Bill effectually, that the town of Luton should be prevented from discharging its sewage as it is at present purified, into the River Lee?—I think so certainly.

1877. Does the same remark apply to Hertford?—Yes.

Cross-examined by Mr. *Sargood.*

1878. I am afraid I must ask you a question or two, although I do not like dealing with subjects with which I am not familiar, not being a chemist. You have spoken about the purity of water and its necessity for the inhabitants who drink it; have you examined the water at Luton at any time; as a chemist, I mean?—Yes, I have done so.

1879. Have you got an analysis with you?—No, I have not. An imperfect analysis was made.

1880. Looking at that, if I may venture to ask you to do so, not with the eye of a chemist, but with the eye of common sense—taking this effluent water, whether it is diminished by 9-10ths of its impurity, or any other given quantity, and considering it cast into the river at Luton—will you tell me at what point of the river you will venture to say that it is injurious either to life or to health that it should be taken out and drunk?—That is an impossibility. I will tell you that there is no point in the river that I will venture to say that it will not be injurious.

1881. That is quite another subject?—No, I think not; I think that is just the difficulty, that it contains matters which are known under certain circumstances to be injurious to health.

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1882. Let me see if I can relieve you from the pressure of my own question; I have put to you, at what point of the river will you venture to say that it is prejudicial to life or health?—Nobody will dare to say so.

1883. Here is some of the water taken at the mouth of the sewer; will you venture to say that that is pernicious to life or health (*referring to sample No.* 1)?—I have not seen the samples. It does not matter whether these samples come from Hertford, or anywhere else.

1884. That is argument; my friend, Mr. Davison, will do that almost as well as a chemist?—If you wish to learn my opinions, you must have them as I will give them to you.

1885. You began by telling me that water from the mouth of the sewer, you will not undertake to say, is injurious to life or health?—How could I? you might drink it yourself and not suffer from it.

1886. No. 2 has had a run of 20 yards in the river, mixed with the river water; and the gentleman who produced it tasted it, and said it was not bad; will you undertake to say that that is mischievous to life or health?—The same answer will apply. It contains matters which are calculated to be mischievous to life or health.

1887. I am perfectly willing to admit that; now, we will give it a run of 20 miles down the river before the first intake of the water company happens; are you prepared seriously to say that under any circumstances the Luton water can be likely to do an injury to any one there?—I cannot say; it is the same thing precisely.

1888. I ask you for your opinion as a chemist: I am putting it to you plainly, and also as a matter of common sense; do you mean to tell this Committee that that water, be it what it may, after a run of 20 miles down the river to Hertford, in your judgment is at all likely to do injury to any human being?—I quite take the point you put, and I will give you my opinion as a man of common sense. I would say, knowing as I do, that the process by lime takes out nothing but solid matter, and knowing as I do that the greater and the most injurious part of the matter is in the liquid, I say, as a man of common sense, I prefer not, and I would object, to drink that water.

1889. I am not asking you what you prefer; I am asking you, as a scientific witness, supporting a case of prohibition against us; are you prepared to say, in your belief, that water, after a run of 20 miles in the river, is doing, or is likely to do, any injury to any human being whatever?—I am prepared to say that water of that nature may, under given conditions of the public health, be very injurious.

1890. You will excuse me for saying that you are not answering the question?—I wish to answer your questions if you will put them distinctly.

1891. I ask you, in your judgment, with your experience, and after your inquiry, as one of Her Majesty's Commissioners, are you here to tell this Committee that you believe the Luton water, at a distance of 20 miles, when taken in at Hertford, is doing, or is likely to do, injury to the health of any human being?—I believe that Luton would form no exception to any place.

1892. Will you answer my question?—The question is not one on which I can give you a direct answer.

1893. Have you taken out water from the river anywhere near the intake of the company, with a view to ascertain whether, in your judgment, Luton was damaging it?—I have taken out water from the River Lee, in various places, for the purposes of the report of the Commission, and in all cases I have found that there is a larger quantity of organic matter in the lower portion of the river, below the different towns, than there is above. As to my tracing Luton sewage, at any particular part of that river, you must know that you are asking me a question which I cannot answer, except in a way which would mystify anybody who heard me. I cannot trace Luton sewage clearly.

1894. Have you taken out water in the neighbourhood of and above the intake of the New River Company, with a view to see whether you could detect that sewage matter was doing an injury?—Pardon me, I should not think of doing such a thing as seeing whether sewage of Luton being thrown into the river was to be found there. If my knowledge is of no use to this Committee, except so far as I can fix common sewage 20 miles below, of course I have nothing to say on the subject at all.

1895. Sir

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1895. Sir *George Bowyer.*] You cannot tell which is Luton sewage and which is Hertford sewage?—No.

1896. Mr. *Sargood.*] That is not what I am asking you. I put this to you. Leaving Luton out of the question, have you taken out water from the river at or above the intake of the New River Company, with a view to ascertain whether such water was being damaged by sewage from any town of any sort?—There is an analysis at page 22 of this Report. I see there is "the Lee above Hertford," and "the Lee below Hertford."

1897. I do not want to go below Hertford?—Here is "the Lee above Luton," at page 22.

1898. I do not want to go "above Luton." I say, at or near the intake of the New River Company, which is just above Hertford, and 20 miles away from Luton; have you made any inquiry or analysis of the water there?—The only analysis that I have made of it you will find in this Report.

1899. *Chairman.*] Referring to your analysis at page 22 of this Report, do you find with regard to the River at Luton that the mineral in the water is 19·57, and the organic matter 0·74, making a total of 20·31 of matter?—Yes, that is so. There is nothing very extraordinary now in the water there.

1900. Mr. *Sargood.*] Taking it at or near the intake of the New River Company, do you mean to tell this Committee that in your judgment there is anything positively dangerous to health in the state of the water as you have analysed it?—No, I would not say that for a moment.

1901. When doctors disagree, it is very often matter for us, or people who do not understand much about it. You have already said you do not agree with Mr. Rawlinson in what he told me in cross-examination?—Because I did not believe Mr. Rawlinson meant to tell you so.

1902. You do not think he intended that?—No.

1903. Let me tell you what he said at page 17, of the 24th April, No. 127. I will read you exactly what he said with great deliberation. We will assume that he did not mean it, for a moment. I say this to him: "Your attention has been called to the question of deodorising by lime; I suppose if that process took place it would not require so long a distance for the material to travel through the water in order to become partially pure, would it?—*A.* If you take out of sewage water all that can be extracted by the liming process, that is, all the solid and all the floculent matters, you take away probably 9-10ths of its power to do mischief, and you would unquestionably remove perhaps 9-10ths of its mischievous effect from the stream into which it passes. It is not so much the water that causes the mischief as it is the solid matter." Having heard this deliberate answer of Mr. Rawlinson's, which is his own phraseology, and not my friends paraphrase, do you mean to say that you do not think Mr. Rawlinson did not mean to say what he said?—If he meant to say what he said——

1904. No ifs; will you be kind enough to answer my question?—I clearly think Mr. Rawlinson never meant to give the impression which you draw from your——

1905. I do not ask you about impressions; did he not use these words that you have heard; do you mean to say that you think he did not intend to use these words?—I am sure he did not intend to convey the idea that nine-tenths of the impurity is taken out of the sewage.

1906. That is not what he says; the words are these: "Nine-tenths of its mischievous effect from the stream;" do you think he did not mean to say that; I am referring to page 17, No. 127?—I do mean to say that he never meant to say that nine-tenths of the mischievous effect of the sewage was taken out of the stream, as a stream for water drinking.

1907. That is not what he said; I am only reading what he said?—I suppose he meant to say what he said, but I say the inference you draw from it is the wrong one.

1908. I draw none at present. I will just refer you to Question 941 of the next day, when he had had a great deal of time to think about what he had said. "I think so far as Luton carried out these intercepting works, and so far as it takes out the solids from its sewage, and clarifies by the use of lime what remains, that it removes a great part of that which produces the greatest amount of mischief." Do you think he did not mean to use those words?—I dare say he did.

1909. Now one word as to the analysis, and only one. In page 135 of the

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evidence taken by you and your colleagues on that Commission, we have the advantage of an analysis which is put in by Mr. Longmore, which was an analysis made by Mr. Taylor. You probably remember that such a thing was put in before you as a commissioner?—Yes.

1910. You know Professor Taylor?—Quite well.

1911. May I venture to ask if you respect his opinion?—Yes.

1912. I am very anxious just to call the attention of the Committee to the evidence taken before the Commissioners, at page 135 of their report. Professor Taylor, in making an analysis of four samples taken from Hertford, adds these words by way of conclusion to his report: "The result of this analysis shows that the four samples of water are good, wholesome, and fit and proper for the supply of the town for drinking, and ordinary domestic purposes." Do you venture to differ from Professor Taylor when he made that report?—I do not know anything about it. I have no doubt he means what he says.

Mr. *Stanhope* proposed to cross-examine the witness on behalf of Hertford.

The *Chairman* stated that he had better do so at the next meeting of the Committee.

[Adjourned to Wednesday next, at Twelve o'clock.

Wednesday, 20th May 1868.

MEMBERS PRESENT:

Mr. Ayrton.	Mr. Alderman Lawrence.
Mr. Benyon.	Mr. Powell.
Sir George Bowyer.	Mr. Surtees.

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

Professor *John Thomas Way*, Cross-examined by Mr. *Stanhope*.

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1913. Do you know Hertford Sewage Works?—I do.

1914. You have been there often, have you not?—No, I have not been there often; I have been twice there, I think.

1915. What is your opinion of those works, are they very good works?—They are very good works for the purpose for which they were intended.

1916. Did you ever see better works anywhere for that purpose?—Yes, I think I have; the Leicester works are better; they are larger, and more fitted for the population which they serve.

1917. They are formed upon the same principle, are they not, as these,?—They are.

1918. I understand you to say with respect to the sewage water which comes down from these works that it is free from dirt or smell in the water, but your objection to it is that it is not safe for drinking, is that so?—It may be more or less free from filth or dirt, but I doubt whether it is free from filth or dirt, because on two occasions when I have seen the works, the water was not perfectly clarified.

1919. Do I understand you to base your objection to the water upon that ground, as well as upon the question of its safety for drinking?—Yes; first of all, the water is not always clear, and secondly, if it were so, I consider it would not be fit for the purpose which we are speaking of, namely, for drinking.

1920. Upon that point of safety, when you use the word "safety" do you mean to adhere to the word "safety," or do you change the word to right for drinking?—I should have preferred the word "safety," but of course modified as the Chairman has put it; it is not right that the people should drink the water.

1921. Nevertheless, I believe it is a fact, is it not, that this system has been going on for some time, and after the sewer has joined the River Lee, it is drunk by hundreds and thousands of persons without any injury?—No; I cannot say that it is drnuk by hundreds of thousands of persons without any injury.

1922. Without any injury to any persons that you know of?—That is impossible to say, we cannot say how much injury has been done by that water.

1923. Have you ever heard of any injury being caused by its being drunk?—It is impossible to trace the injury done by bad water, it is one of the predisposing causes of disease.

1924. Are you aware also, that even before this sewage water has joined with the Lee, it is drunk?—That the sewage water is drunk?

1925. That the sewage water even before it is mixed with the Lee and goes down the river, is drunk?—No, I was not aware of that; what are you speaking of; after it has gone through your gravitation works?

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1926. I am only referring to the fact of its being drunk by some persons habitually?—I do not know that.

1927. Looking at the fact that this water, even before it joins the Lee, is drunk by some persons habitually, and that after it joins the Lee, I believe for a large number of years, it has been habitually drunk by hundreds and thousands of people, apparently without any injury, do you, as a practical man, say that there is any real or any practical likelihood of any harm being done; as a chemist, no doubt you would say that, theoretically it is done; but as a practical man, do you say there is any injury?—If you will allow me to answer that question in the sense which it should bear, I will tell you this: that the death rate of the population of London is more than it should be, and a variety of causes contribute to that death rate. No doubt a certain amount of the impurity in the water which is drunk in London, which is not denied, is one of the causes of that increased death rate, and under certain conditions of the atmosphere, and temperature, and of public health, no doubt that water contributes to ill-health; there is no doubt of that.

1928. You see you are not speaking with reference to this Hertford sewage, because you do not tell us in the least whether you think it is caused in any greater degree by the sewage coming from the Hertford works, where a very perfect system is carried on, than from other places where a less perfect system is carried on?—I do not say that the effect of the sewage of Hertford is greater or less than in other cases; I do not say that for a moment; what I do say is, that you never can tell how much injury to the public health is produced by such causes. I do not consider that either Luton or Hertford are to be looked at as places creating a very notorious nuisance.

Re-examined by Mr. *Wilkinson.*

1929. You see nothing exceptional in the cases of Luton or Hertford, which would be a reason for them being pointed at in any way as an exception from the general principle of this Bill?—Certainly not.

1930. *Chairman.*] That is not asking the Witness any evidence upon facts; that is putting it to the Witness instead of the Committee.

1931. Mr. *Wilkinson.*] Let me ask you this: you compared the works at Hertford to those which were in operation formerly at Leicester?—Yes.

1932. The principle is the same, is it not?—Yes, the principle is the same.

1933. You have examined those works at Leicester, I suppose?—Yes, I have done so several times.

1934. The result of that process was simply this—to send out into the river water which was apparently free from colour, and to a very great degree free from any appearance of sediment, was it not?—Yes; the Leicester works were established under a very fatal notion—they were established under the notion that the material separated by the lime process was a valuable manureal substance. They were laid out at a very great expense, not at all, in fact, for the purification of the sewage of Leicester, in the first instance, but for the acquisition of a large profit in the manufacture of manure from sewage. The consequence was that as every portion of the matter was considered to be worth saving, the tanks and different arrangements were made on a very large and perfect scale, with a view of preventing the loss of any portion of that which was considered valuable matter.

1935. That was the solid residuum?—Yes, the solid residuum. The Leicester works were made larger and much more complete than any works which have been subsequently put up, and that was simply with a view of doing the thing very perfectly for the sake of the profit. Now, on the other hand, all the works which have been put up since have been put up with a full knowledge that there was no money profit to be gained, and therefore the object was to do the minimum work rather than the maximum.

1936. May I assume, from your remarks, that the works at Leicester would be superior to those executed at Hertford?

Mr. *Sargood.*] Leicester does not arise upon our cross-examination.

Mr.

Mr. *Wilkinson.*] I have a right to draw a comparison, as one has been instituted.

Mr. *Pember.*] There is no question as to Leicester.

Mr. *Sargood.*] It was thrown in by the witness.

Witness.] I was asked whether I had seen the Leicester works, and other works.

1937. Mr. *Wilkinson.*] My learned friend, Mr. Sargood, rather examined you as a chemist, and directed several questions to you in that capacity; but you attend here not only as a chemist, but as one of the Commissioners, to give your evidence upon the whole bearing of the case, do not you, and not merely as a chemist?—Certainly; I think I can form a very good opinion as a man of ordinary common sense, in addition.

1938. And, therefore, having considered the question, not only as a chemist but as a Commissioner, in your judgment does the safety of the public depend upon this greater or less degree of impurity which is established by analysis?

Chairman.] Is this question asked him as a chemist?

1939. Mr. *Wilkinson.*] It is asked as a chemist, and as a Commissioner extending his chemical knowledge, to which my learned friend cross-examined him, to the wider view that he would take as a Commissioner; but I will put it to him in another way, if you please. (*To the Witness*). Asking you the question as a chemist, is it possible for you to detect with accuracy all the latent poisons that may be in the water submitted to you for analysis?—No, it is not; it is quite admitted by chemists that the analysis of water is in a defective condition; we can tell very bad water, and I think we can tell very good water, but we use our chemical knowledge to supplement our general knowledge of the science, as applied to the question of water; we do not say this and that sample is so and so; that sample is rather better than this sample; we cannot say that, and we do not pretend to say it.

1940. Is it rather by induction, and indication of poison, than by the actual poisons themselves, that you judge?—Yes; we use the analysis of water as a means of correcting our observations upon the subject, our common sense and common knowledge.

1941. Then if I understand you, it may well be that this injurious matter may be almost infinitesimal in the water submitted to you for analysis, and yet be injurious to the public health?——

Chairman.] What are the injurious matters; you keep asking about injurious matters.

1942-3. Mr. *Wilkinson.*] Injurious matters which you detect in the analysis of the water which is submitted to you?—It is well known that there are some indefinable matters, most probably of an animal character, which are capable of setting up a kind of fermentation in the blood, and producing disease; those matters may be infinitesimally small, but they are still capable of doing great mischief.

1944. Mr. *Pember.*] Is boiling supposed to put a stop to that?—Yes, boiling does destroy it.

1945. *Chairman.*] We have been told that there is thrown into this water a certain amount of oxalic acid, and we are also told that there is thrown into this water a considerable amount of quick lime?—Yes.

1946. They mix together?—Yes.

1947. Can you tell us what is the chemical result of that?—I do not think that anything is to be apprehended from the fact of oxalic acid being thrown into the water. If no lime were used at all there would be a large quantity of carbonate of lime in the water naturally, which would quite destroy any injurious effect of oxalic acid. The reason for mentioning that in the Report (there is a qualifying sentence) is, that it is one of those abuses we considered it necessary to point out merely as an illustration.

1948. The effect would rather be that it would combine with the lime and precipitate something that would be insoluble, and so far that would improve the water?—No, it is merely that the lime that is present in the water unites with the oxalic acid and removes the oxalic acid. The oxalic acid is not present

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in any sufficient quantity to require any appreciable quantity of lime to remove it. I do not place any stress upon that one way or the other.

1949. You think that the oxalic acid would vanish in the chemical action?—Yes.

1950. With regard to the substances that may be possibly of an injurious character in the sewage, what are those known to you as a chemist?—Do you mean in the ordinary sewage?

1951. I want you to describe what are the substances that your scientific knowledge has enabled you to detect in the sewage as injurious to health?—Sewage, as a matter of course, contains in a well-sewered town all the excrement of the population. Now if anything has been proved with regard to disease, and especially with regard to cholera, this fact has been proved, that the excrement and the urine of persons afflicted with cholera are capable of giving cholera to other people. There is no doubt that the matters of urine and fœces are in their nature the most injurious in the shape of animal poisons that can possibly get access to water. It is impossible to define them. They are of the nature generally, as I said, of animal substances, that is to say, containing nitrogen, which causes a ferment, and if water at any time produced disease that is the character of water to produce it.

1952. What I want to know is, what is the boundary between scientific knowledge and general inference in these matters?—I do not think there is any distinct boundary of that kind. The one class of information overlaps the other.

1953. May we take it then as a result, that chemical science as a science has not detected anything that is injurious to health, that it can present us no known substance?—If you mean, can chemical science take out of sewage some matter which will necessarily produce a given class of disease, I am not prepared to say that that is so.

1954. I am asking you whether it has been, not whether it can be; whether in any scientific experiments you have made you have obtained any product that you can present to us as a known product injurious to health; I want to find out the limits of science and the limits of general opinion?—I do not think that is precisely the question before me. Your remark would apply to this: take such a thing as strychnine and morphia, different vegetable and animal poisons, do we find anything in sewage analogous to those as strict poisons?

1955. To go more immediately to the point, if you examine the ejecta of the human body, you will find I suppose uria, for example?—Yes.

1956. I suppose you would pronounce that uria, taken in certain quantities, would be injurious to health?—I am not sure that I should say that, because uria does not remain in the sewage water any length of time.

1957. That is exactly what I want to get before the Committee; will you give us accurate information, founded upon your scientific knowledge, and separate that from the general conclusions that we may be permitted to draw in common with yourself?—I must answer you that no specific poisons, so far as I know, can be separated from either fœces or urine; but the matter ejected from the human system undergoes, by putrefaction, a variety of changes, passing through all sorts of organic products, which we could not follow or trace; but we have the greatest reason to know that that class of product is a class of product which sets up disease. Now vaccine matter, which is known to have such a powerful effect upon the system, is not a matter of any absolute chemically defined composition; it is a matter of a peculiar nature, which we only know by its effects.

1958. Do I understand that chemical science has not detected in sewage any specific product that you are enabled to pronounce injurious to health?—Any specific poison; that is so.

1959. The result of the analysis is that you produce certain matters which you call, I think, organic matters?—Yes; those analyses that you have do not profess to show anything more than general results.

1960. What is the organic matter that you have not been able to discover?—We are able to discover that the organic matter is of what we call a nitrogenous nature, and a non-nitrogenous nature; we cannot tell, for instance, whether products, like starch or sugar, might be in sewage in a defininite substance; all the substances that we know, as chemists, defininitely, are of a crystalline character in their nature which cannot be separated; but we do know that there are matters in various stages of putrefaction, and we know from the researches of

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of medical men, and from general knowledge of the laws of health, that such matters will produce disease.

1961. We will come to that presently, but I am now upon this; as a matter of strict science, I think you state that you know whether the organic matter is nitrogenous, or non-nitrogenous?—Yes.

1962. Is the organic matter which is found in the River Lee nitrogenous, or non-nitrogenous?—That is not shown by analysis; but I should say that within the last few months, great efforts have been made to improve the analysis of water; and two or three chemists, myself among the number, have been engaged upon new methods of examining the water; but I doubt very much whether anything sufficiently definite has yet been done to justify us in drawing conclusions.

1963. I am asking you as to the fact, whether the organic matters described in the analysis of the River Lee were ascertained to be nitrogenous or non-nitrogenous?—There is no doubt that they were partly nitrogenous, and partly non-nitrogenous.

1964. What would the general vegetable matters that are in a river be accounted; that is, for instance, straw, or other matters passing through a river; would they be called nitrogenous, or non-nitrogenous?—There is no body that is not both nitrogenous and non-nitrogenous; but the characteristics of matter derived from animal decay of any kind are different from that of vegetable.

1965. In point of fact it comes to this, organic matter may be any kind of animal or any kind of vegetable substance?—Yes.

1966. That is what I want to arrive at, but what it is and what its specific qualities are, chemical science did not at that time enable you to discover or declare?—You are alluding to these particular analyses.

1967. I am alluding to these particular analyses?—I know for a fact (because I have some analyses that I do not think it right to publish, for the very reasons I gave you) that these waters do contain nitrogenous matter in considerable quantities.

1968. Do I understand that if urine is subject to analysis you are enabled to detect in it a number of specific chemical substances?—Yes, fresh urine.

1969. Then this would be the case: organic matter in its general classification can be analysed into several different substances, which are known to chemists in the state of urine?—Yes, that can be done.

1970. Is it your opinion that these chemical components can no longer be detected as present, because they undergo some change by ordinary chemical process?—Yes, urine is not half an hour after it has passed from the body without beginning to change, and after a time uria and uric acid and the other components of an animal character disappear and pass through various changes to the final elements.

1971. Does the change that those things undergo, depend very much upon whether they are allowed to ferment or whether they are not allowed to ferment?—Yes, a good deal.

1972. I suppose if a substance is subject to a process of fermentation, its whole character is chemically and entirely changed?—Yes, the change occurs whether or no in the case of urine, but you have a more rapid passage in the case of dilution, which prevents fermentation to a great extent. You have a more rapid passage into the ultimate products, ammonia and nitric acid.

1973. The state of the matter will depend very much upon whether it is allowed to ferment or not, and to what extent of fermentation it is subject?—Urine becomes more offensive when it is allowed to ferment before dilution, undoubtedly; but still you have the same thing produced with certain modifications.

1974. After fermentation it would have undergone an entire change; do we know exactly what it is then?—You will have, after perfect fermentation, nitric acid and ammonia and carbonic acid principally produced; you have the matter breaking up into the simplest forms.

1975. Into their elementary forms?—Yes.

1976. Whether those elementary forms are or are not injurious to health, is dependent upon the quantity?—No, it is not where nitric acid, for instance, is in water, the nitrates are not unhealthy; but we use them as an indication of how much matter producing nitrate has been present at any time.

1977. Nor is ammonia an unhealthy thing?—Not at all.

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1978. Or else the people who eat Bath buns at the railway stations would be in considerable danger?—I do not know that.

1979. Then it is also a question of degree as regards the elementary components which result from fermentation, whether they are injurious or not?—If it is in a transition state, a substance passing through a change and being fermented, is in itself capable or producing fermentation in other bodies.

1980. Just the same as in the case of wine, which in an actual state of fermentation is considered very unhealthy?—Yes, it is peculiarly so in the case of yeast, which is a ferment simply because it is undergoing a change itself.

1981. It accelerates motion and action in the body?—Yes; it is, as it were, a chemico-physical phenomenon, that is to say, it produces force to set other things in motion by its own change.

1982. What do you consider to be the effect of mixing lime with the substance of sewage either before, during, or after fermentation?—Taking sewage to be chiefly the urine and the fœces of man, diluted with more or less water, say from 10 to 15, 20 or 30 gallons of water, I believe the chief action of the lime is to do this; it unites with the carbonic acid in the sewage water, and it unites with the phosphoric acid, and in doing so, it produces a flocculent precipitate, which carries down the suspended thick glutinous matter, which otherwise would not settle, but beyond that it does not remove any considerable quantity of the matter which is already in solution.

1983. Then what remains would be matter in absolute solution?—Yes; that is to say, if you take the clear liquid when it has subsided.

1984. Have you attempted any analysis of water after it had been subjected to this process?—Yes; I have frequently analysed water after this process.

1985. What has been the result of these analyses?—I will give you an illustration; if you take sewage water, and filter it through paper, so as to remove mechanically the whole of the matter suspended; and if you take another quantity and add lime, but in the same way as would be done at any of these works, and then take the clear liquid from that, you will find that so far as the two liquids are concerned, there is almost identically the same quantity of organic matter in each. I have a number of analyses of that kind, though I have not them here; and it is a well-established fact, in science, upon the subject. We consider lime as a means of clarifying. You cannot practically filter sewage, because it stops up the pores of the filter; but lime enables you to make the solid matter separate, which it would not do otherwise.

1986. Therefore you get rid of so much solid matter?—You get rid of all that is in suspension if it is properly done, and obtain a very bright clear water.

1987. Being mixed with a large volume of water, is it in any way subject to the law of decomposition of bodies in water, or do you think that it remains exactly as it was, that it never changes?—I have no doubt in the world that a great amount of oxidation and destruction of those organic matters goes on; it must be so.

1988. Slow combustion goes on?—Yes.

1989. It is a question of time and degree as to how long and how complete that combustion may be in the water?—There can be no doubt that the destructive force of nature, so to speak (because apart from organic life all the forces of nature are destructive), would get rid of those things entirely.

1990. I suppose there is a constant tendency in nature to resolve everything into its primitive concomitants?—Yes; and in life to build them up again.

1991. In life to build them up again by organic action?—Yes.

Sir *George Bowyer.*] I understand you to say, that independently of any chemical substances or products which may be separated from the sewage, the sewage itself is of a nature calculated to produce disease.

1992. And that quite independent of any chemical substances which may be separated from that sewage?—It is independent of any definable chemical substances.

1993. That the organic matter which composes the sewage is in itself poison?—Not necessarily is, but may be.

1994. When it is in a state of putrefaction?—It is liable to be poison. It is just this; that you might take any water which contained such objectionable ingredients, and drink it for many years, but in a particular condition of your health it might be very objectionable. That is the impression, at all events (perhaps

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(perhaps I ought to speak from what I know), of other medical men. That is the conviction as to the history of the outbreaks of disease where they have been traced, as in the cases which occurred in Essex.

1995. My question did not refer so much to water after it had been subjected to any process, as to the sewage itself; that the fæces and urine are poisonous, and injurious to health?—Any matters that are undergoing decay are injurious to health. For example, putrid meat. Nothing can be a better illustration than that. Nobody would think of eating putrid meat, even if they could overcome the nausea which would be occasioned by doing so, from the fact that it is injurious to health.

1996. Then, assuming it to be the case that you cannot separate any specific poison from these fæces, that fact is immaterial for the purpose in hand, because the fæces are of themselves of a poisonous nature?—I think so.

1997. Then it is not material whether, in analysing that sewage, you can or you cannot separate from it any specific known poison?—No; it is not material.

1998. Because the putrid organic matter itself is a poison?—Yes; it is not tangible; it is a poison; you cannot produce it in the particular state in which it is a poison; we must assume it is a poison.

1999. You have no doubt whatever that it is injurious to health?—I have no doubt of that.

2000. I suppose you are not able to say what proportion of this poison mixed with water would render it injurious to health?—No; that, I think, is clearly impossible. The fact is, the question goes out of the domain, for a time, of chemical analysis into chemical argument.

2001. You are not able to say that by chemical analysis; but you have every reason to believe by induction that it is so. Have you any reason to believe, by scientific induction, that the mixture of even a very small portion of this poison with water may be, and probably would be, injurious to health?—I think, if you were to ask any number of scientific men you would have the same answer, that it is impossible to tell at what point it becomes poisonous; but the quantity of the matters which are so poisonous may be infinitesimally small.

2002. And therefore, by scientific induction, it may be that an infinitesimally small proportion of this poison may, under certain states of the human body, produce disease?—Yes.

2003. That is the prevailing opinion among scientific men?—That is the opinion held by most men.

2004. Then I conclude your opinion is, that no sewage matter whatever ought to be allowed to go into water which is used for drinking?—That is absolutely my opinion; I think it is the only proper course to take. We know when it goes in; it is a difficult thing to say, and we do not know when it is taken out, or how it is taken out. But one thing we can do, we can prevent its going in, but we can never ensure its removal.

2005. You are, then, of opinion that the only safe course is, to prevent any sewage matter going in at all?—I think so.

2006. That is your view as a chemist, and as a man of science?—I think that we have only got habituated to the notion, but it is a deplorable thing that water for drinking purposes should be of that kind.

2007. After the solid matter from sewage is precipitated by the action of lime, there still remains organic matter in solution in the water, which is thereby produced?—It is scarcely altered, so far as the quantity in solution is concerned.

2008. Therefore the lime merely operates upon the solid matter?—Yes, it is a mechanical action almost entirely.

2009. In fact, the lime does not neutralize any poison in the sewage; it merely combines with the acids?—Yes.

2010. And that combination with the acids has the mechanical effect of separating the solids from the fluids?—That is so; you can do the same thing with a variety of things. For instance, perchloride of iron will precipitate oxide of iron. If you add perchloride of iron to sewage, it forms a flocculent precipitate of peroxide of iron. That is an exceedingly good precipitate for sewage.

2011. Then I gather from your opinion, that you think that lime is not what may be called an antidote for the poisonous quality of sewage?—Not at all.

2012. It is merely a means of producing a mechanical separation of the solids

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from the fluids, which might be produced by filtration?—Which might be produced by filtration, but which is not practicable by filtration.

2013. Consequently the lime is not a remedy against the poisonous quality of the sewage?—I think not.

2014. After the action of the lime upon the sewage, the water which remains still, contains a quantity of sewage matter, which you consider to be injurious to health?—All, or nearly all that which was in solution before the lime was added.

2015. In fact, after the action of the lime, the water contains all the sewage which was in solution?—Yes.

2016. And nothing is separated but the solid portion which was not in solution?—I think that a little phosphoric acid is separated, which may cause the formation of phosphate of lime, but that has no influence one way or the other.

2017. Therefore the sewage water which remains after the action of the lime, is calculated to be just as injurious to health as the solid matter is?—Just as the total sewage is; I do not quite take your question.

2017*. *Chairman.*] The question asked you is, whether the matter in solution after the solid matter has passed off, produces the same injury to health as the whole matter of the sewage, without the solid matter being precipitated?—No; I do not mean to say that.

2018. Sir *George Bowyer.*] That is not what I asked; I want to know whether the matter which remains in solution, after precipitation by the action of lime, is of the same deleterious quality as the matter which is contained in the solids which are precipitated?—I believe that the liquid contains the most objectionable matter; but there is no doubt a great alienation upon the score of health as well as of appearance in the fact of the removal of the solid matter; I do not wish the Committee to take a false view of that for a moment; I say if we could not get anything but this, we should have gained something very considerable in precipitating sewage.

2019. I want to know if you precipitate the solid matter, and take the sewage water which remains, which of the two would be the most deleterious?—The liquid, undoubtedly, there is no doubt of that, because it contains the most nitrogenous elements of sewage, but the solid matter is likely to ferment again, and to hang about the channels for an indefinite period, and it is apt to be producing mischief; I do not doubt for a moment that sewage treated, is much worse than sewage untreated.

2020. Then you are of opinion that the matter in solution is more injurious than the solid matter?—As a matter of health, I think so.

2021. Consequently, although the water treated by the lime process may be apparently quite clear, yet it contains matter which is more injurious than the solid matter which is precipitated?—Yes, if you divide them into two, but not so injurious as the whole matter.

2022. I mean if you divide them into two, divide the solid from the matter in solution; your opinion is that the matter in solution is more injurious than the solid matter which is precipitated by the action of lime?—Yes.

2023. *Chairman.*] Weight for weight?—Taken as sewage.

2024. Do you mean that if the solid matter taken from a gallon of water and mixed with a gallon of pure water were stirred up and drank, that it would be less injurious to health than if you took water that was drained off from the deodorising tank?—No, I do not mean that, because I presume that in neither case will the solid matter be drunk.

2025. I ask you whether you mean weight for weight of matter, or whether you mean the products produced from a gallon of sewage?—I mean to say that the most injurious part, so far as it affects health, is that which is contained in the liquid state; that that is the largest quantity. I stated in my evidence the other day that the larger quantity of excrement was in a state of solution.

2026. Weight for weight?—Weight for weight.

2027. Sir *George Bowyer.*] You mean to say that there is a larger quantity of excrement in the liquid than there is in the solid?—If you take the average fæces and urine of a man, and dry them both up to absolute dryness, that is, get rid of the water, there will be more weight in the urine than there is the fæces.

2028. Therefore the stuff in solution is worse than the solid matter?—That is so. It is worse in quality and larger in quantity.

2029. But,

2029. But, irrespective of quantity, it is more injurious?—I think so, certainly.

2030. Then your opinion is not a favourable one as to the disinfecting effects of the lime process?—I will not say that; I wish to be quite impartial in this question. I think if we could get nothing beyond that it is good.

2031. I am speaking of what you have got, the actual process in use?—I think it is undoubtedly a great improvement; it is a great improvement over leaving the sewage in the natural state.

2032. Getting rid of the solid matter must be an improvement, because the total of sewage, taking the solid and the liquid together, must be more injurious than either separate. That is not what I mean; but I gather from you, and I want to know if I am correct, that your opinion of the lime process is not favourable, inasmuch as the lime process is a mechanical separation of the solid from the fluid, and leaves the fluid, which contains the greater quantity of the deleterious substance of sewage?—My opinion is unfavourable to the lime process, in so far as this, that it does not go the whole length of what such a a process ought to do; and that there is another process, that is to say, putting the sewage on the land, which does purify it as well as it is possible to do, and much better than the lime process.

2033. Mr. *Benyon*.] Your idea is, that though sewage may be dealt with in such a manner that the effluent water may be deprived of all solid matter, and of all injurious matter that can be detected by science, yet as we know that certain injurious poisons result from the putrefaction of sewage, we assume that those injurious poisons are in the effluent water, though we cannot detect them?—I do not think I went that length; I said that sewage water could be dealt with so as to remove all solid matter visible to the eye, and that which was not removed we were not in a position to take out and exhibit to you any specific poisonous matter; but that we knew that a very large quantity of matter in a state of transition from fermentation existed in it, which from all reasonable induction and knowledge was capable of producing disease.

2034. And you do not think that those poisons are removable by the action of the atmosphere upon the water, or by vegetable life or by animal life, as of fish?—I do not say so; I say that in the abstract, they are all removable by natural causes.

2035. Therefore when we drink sewage water after a nine miles' run, or something of that kind, it is not a necessary consequent that that sewage water should have in it any of that poison to which you have referred?—No; you can conceive it all being removed; I do not say in nine miles or in 90 miles.

2036. You mean that it is a question of degree?—It is a matter of degree entirely; that is to say, I agree that that is so in the abstract; but I think if it is urged as a reason why that which is known to be in the water has been taken out, we should call upon other people to show that it has been taken out. I do not believe in the power being adequate to the object.

2037. *Chairman*.] You have stated that you think if sewage flows over land, I presume you mean with something growing upon it, that it is then deprived of that matter which you think may contain something injurious?—Yes; I believe that that is a very natural means by which the matter is reduced into a state for vegetation.

2038. Is that, in your opinion as a chemist, produced by the plants taking up this injurious matter as food, or by the land, over which the matter runs, taking up the injurious matter by chemical combinations; or is it by the atmosphere entirely destroying it?—It is by both. There is no doubt that when vegetation is active a larger quantity of water can be purified in a given time, than when there is no vegetation upon the soil; but the soil has a specific power itself of removing such matter from solution. I carried out a number of experiments, some years ago, which have been amplified, and have attracted a great deal of attention, and general adhesion, I believe, to show that the soil has a specific power of removing matter from solution.

2039. Filtration through soils will remove those matters?—Yes; not by mere mechanical action, but by means of chemical action; but by vegetation upon the land you get a double action. These matters are converted into grass or vegetables, as fast as they are separated from the water.

2040. Have you had your attention to the proportion or rate by which this process will purify the water; that is, how many gallons over any given number

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number of feet, or any elementary quantity of that sort?—There is a great deal of knowledge upon that subject which I have met with, and of course I am conversant with it generally. I might say, as an illustration, that at Croydon, for instance, they put upwards of a million gallons of true sewage water, which becomes diluted perhaps with two or three times its weight of surface water, on from 20 to 25 acres of land, in from four to five days successively; that is to say, the whole of the sewage which would be there, or four or five millions of gallons in its diluted condition; the sewage from 30,000 people, at least, is put upon some 20 to 25 acres for four or five days, and at the end of that time it is changed, and put on to other land.

2041. You think that that is sufficiently purified to go into the stream after that process?—It is the best we can get. I believe it produces water that contains very little organic matter, compared with this water.

2042. Have you examined the river between Luton and the intake of the New River Company, to ascertain the amount of vegetable life that is existing upon the banks and the bottom of the river?—I have seen the river; I cannot say that I have examined it very closely; I know it generally.

2043. Is that very extensive?—I believe there is a great deal of vegetation.

2044. It opens out at Luton into a park?—Yes.

2045. That, I believe, is a large area of water, with a great quantity of vegetable life in it, and some animal life in it?—Yes.

2046. Have you considered what the effect of the amount of vegetable life upon that area of land, upon the banks and the bottom of the river would be, as compared with any given area of land over which the sewage would be passed?—If you will pardon me, I think you will see that you have introduced a totally new element, and one which does not leave the question so simple as it might seem at first sight. The fact that vegetation is very prolific in streams may be often traced to the impurity of the water, because in mountain streams there is no vegetation upon the land at all, and the vegetation which grows by abstracting the impurity of the water. The vegetation in its turn dies, and gives the same substances in a modified form to the water.

2047. When the vegetable substances die, if they are allowed to die in the river, and are not taken off the surface of the river, at all events, they are simply vegetable matters, and would be no longer the substance which we have been discussing, they would be totally different matter?—There is no doubt of that. Vegetation in a stream is of great assistance in purifying the stream.

2048. Have you seen in the upper river Thames, that there is generally an enormous growth of vegetable matter, and that after anything is poured in about a mile or so down the river, it assumes the character that it had before, in appearance of purity?—That is so.

2049. Have you examined it sufficiently closely to form an opinion, that considering the extent of the banks of the river, and the enlargement of the bed of the river at various places throughout the length of 10 miles, it would have as great an effect upon the small quantity of discharged matter poured in at Luton, as if it were passed over land; I mean the same effect at the intake of the New River Company?—No, I think not; in fact the practical effect in the case of land is, that the surface, the area of land exposed, as compared with the matter to be removed, is enormous; you have in every acre of land an inch deep, a hundred tons of soil, that is the difference; you have in an acre of land 10 inches deep, a thousand tons of soil, and that presents in the interstices, an enormous surface for any action, and that kind of surface which you cannot get in any natural channel.

2050. It is a question of degree what remains?—Yes; I quite grant you that running water, more or less impure, containing much vegetation, will necessarily be more or less purified.

2051. With varied banks, water must undergo a considerable change?—It is better it should not have any rest as it passes.

2052. Mr. *Powell.*] Do you consider that chemical science is advancing?—Undoubtedly.

2053. Are you able to detect, as science advances, substances which in the earlier stages of science defied analysis?—Yes.

2054. Has it ever been the case that in a previous stage, when your knowledge was less perfect than it is, you have suspected or have been certain of the existence

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existence of an agent from its having certain effects, the agent at the same time defying your analysis, so that you could not produce, or separate it?—You mean to say, has it been dependent upon induction, rather than absolute fact?

2055. Dependent upon what you please; has that been the case in the progress of science?—It must necessarily be so in all science; it must be the case when you go beyond the immediate range of those things which are certain, to those which are probable.

2056. Have you been less certain of the existence of these agents, observing their effect, although you have not been able to separate them?—I think, as a rule, we find things by induction before we find them as positive facts; that is to say, that the laws in matter which are only recently fixed, have been shadowed by men conversant with these things before they have been absolutely proved.

2057. Do you feel less certain, for example, that there is some poison which promotes typhus fever, because you are unable to separate that poison, and put it in a definite shape?—All medical science would pass away, and would cease to have any effect, if that were the case; if it were necessary to prove, and to show you the substance which produces the disease, and to point out what it was in that substance that produced that disease, of course there would be an end of all science.

2058. Have you ever been able to separate that which causes either typhus or cholera and to put it upon a table?—No.

2059. But have you any doubt that there is such a thing?—Not at all; for instance, you may catch small-pox by sitting within a few feet of a person having it, but it is impossible to state what it is.

2060. Your desire to remove the condition under which disease is found to exist is not diminished by the fact that you are unable to separate the agent?—Certainly.

2061. Has science ever been able to separate or to produce, in any shape whatever, that which causes gravitation?—No.

2062. You do not doubt the existence of gravitation because you cannot produce it?—No.

2363. Can you state whether there has been any instance of epidemic disease from drinking effluent water which has resulted after the processes adopted at Hertford or at Luton?—I cannot remember that there has been anything of the sort.

2064. Any instance, either epidemic or individual disease?—No, I cannot say that I know of any case of the kind.

2065. Do you know the sectional area of the water at Luton?—No, I do not.

Chairman.] I think you gave the quantity in your evidence.

2066. Sir *George Bowyer.*] I understand my honourable friend to ask you, in substance, whether experiment and discovery does not often support and supplement and confirm and demonstrate the results that have been arrived at previously by induction?—Yes.

2067. But there may be poisons in any substance without your being able to separate them from the substance?—Yes, quite so.

2068. For instance, take the blood of a human being, no scientific man, I apprehend, has ever been able to separate and produce that which causes cancer?—No.

2069. And yet scientific men believe that cancer is a poison in the blood?—Those are conditions rather than organic matters.

[The Witness withdrew.

Mr. *Henry Reason*; Examined by Mr. *Wilkinson.*

Mr. *H. Reason.*

2070. I BELIEVE you are a net-maker and fisherman, are you not?—I am.

2071. Where do you reside?—At Ware.

2072. Do you know the River Lee very well?—Yes.

2073. And you know the Mainfold Ditch?—Yes.

2074. Do you know where the Hertford sewage is discharged?—Yes.

2075. Your occupation, as you tell us, is that of a fisherman; are you in the habit

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habit of resorting to that particular part of the river for the purpose of catching bait for gentlemen?—There is no fish got up that way.

2076. Is it the fact that you are in the habit of using that part of the river to catch gudgeon and bait for gentlemen?—Yes.

2077. You used to do it at one time; was that before the sewage was discharged into the river?—There used to be plenty at one time, but there is none now.

2078. The part of the river which you used for getting those gudgeon, was it or not above the point where the sewage of Ware is discharged into the river?—No, it was below that where I used to catch most of them; there are none now.

2079. There is none now?—No.

2080. What I mean to say is this; you say you used to get fish, was that before the Hertford sewage came in?—Yes, it was before the sewage came in there where there used to be so many about.

2081. Do you know where the sewage from Ware comes into the river?—Yes.

2082. Was this point above where the sewage of Ware comes in?—I should say 300 or 400 yards below that.

2083. Above the point where the Ware sewage comes in; is the point where you used principally to go for these gudgeon above the part of the river at which the sewage from Ware, not Hertford, flows?—Yes, it is just below Mr. Gosling's place.

2084. That was just at the end of the Mainfold Ditch, was it not?—Yes.

2085. Below Mr. Gosling's place is where the Ware sewage comes in, is it not?—Yes.

2086. The Hertford sewage is 300 or 400 yards above that?—Yes.

2087. That comes in from the Mainfold Ditch?—Yes.

2088. And nothing else but the Hertford sewage comes in from the Mainfold Ditch?—No.

2089. Where the Mainfold Ditch comes into the river, has the water been so filthy of late years that you cannot get gudgeon there?—It never was before the sewer came in there.

2090. Before the sewer came in it was all clear, and you got your gudgeon?—Yes.

2091. You cannot get any fish at all now, because the water is so foul?—No, we cannot.

2092. Have you had difficulty in getting your net from the filth and scum in the water?—Yes.

2093. Where have you had that difficulty; is it in the Mainfold Ditch?—No.

2094. Where is it that you have had difficulty; is it in the Mainfold Ditch?—No.

2095. Where is it?—I never was in the sewer in my life.

2096. Where have you had that difficulty; in what part of the river?—It was round Mr. Gosling's place, just below where the sewer comes out.

2097. That would no doubt embrace the Ware sewage as well; used there to be plenty of trout in the river?—Yes, at one time; plenty at one time.

2098. There is none there now?—Very few now. They are very scarce indeed. Hundreds of dozens of gudgeon I used to catch at one time for cooking.

2099. For instance, at the Mainfold Ditch, used you to see pailsful of gudgeon?—Yes, there used to be before the sewer came down there.

2100. And now you find none?—None.

2101. In what state is the water there; is it filthy?—Full of filth and dirt. If you threw a net in there you cannot get it out again without rinsing it a good while to get the mud out of it.

2102. Where is the net; in what part of the river is it that you throw your net when you get it so full of mud that you are obliged to rinse it?—Just at the mouth of where the sewer comes out. We are obliged to clear it with a sponge. The barges used to stop and the filth used to come down.

2103. Are you now speaking of the part of the river close against the Mainfold Ditch?—Yes.

2104. Near where the Mainfold Ditch comes out?—Yes; they are obliged to clear it out now and then.

2105. Do you know whether they have been obliged to dredge it at the part where the sewage comes out of the Mainfold Ditch into the Lee?—Yes, they are obliged to clear it out now and then. The barges stop there sometimes from the filth and stuff that comes out of it.

2106. That would be done by the New River Company, would not it?—Yes, by the New River Company.

Cross-examined by Mr. *Stanhope.*

2107. Where do you catch your gudgeons now?—I do not catch any.

2108. Have you given up fishing then?—No.

2109. What do you catch?—Roach and dace sometimes, and now and then a jack.

2110. They do not mind the sewage, do they?—They do not like it; they do not go up long. If they go up a little way they soon come back again.

2111. Fishing is a good trade with you; you make a good business of it?—I get a good many baits for the gents. I have got good friends which I catch bait for.

2112. *Chairman.*] We understand that there is still the same demand for bait that there was before?—No; I could go and catch 20 dozen of gudgeon at one time easier than I can catch one now.

2113. Mr. *Stanhope.*] Where do you get your bait now?—I go to what is called the Lee for them, below.

2114. How far is that from the point where the sewage comes in?—About 400 or 500 yards below the sewer.

2115. When you are fishing upon this place, I suppose you drink water sometimes?—No, I never drink water.

2116. *Chairman.*] Do you now catch bait above or below the lock?—Below the lock; a long way below.

2117. Have you always done so?—Not always; sometimes we go a little way the other way; sometimes we go up to Hertford.

2118. Do you find much difference in the river above the lock and below the lock?—Yes; a deal of fish will live very well up that way, above the lock.

2119. They live very well up above the lock?—Yes.

2120. When you come below the lock, you do not find so many fish?—No.

2121. Do you find as many gentlemen wishing to fish?—If anybody employs me I get the bait; I go anywhere to get it now and then; I cannot get half so many as I did before.

2122. Are there as many gentlemen now as before wishing to fish in the river?—No.

2123. Are there a great many gentlemen now coming to you, wishing to fish in the river?—A great many like to have a chance.

2124. Do as many gentlemen come now as came before?—No; I do not think there is, because they cannot get no bait, and they cannot fish.

2125. They cannot fish, because they cannot get any bait?—Yes.

2126. Why do you not go above the lock for bait?—Because they will not allow us up there.

2127. Is the river very dirty in front of Ware?—Very dirty indeed; it never was in such state before this sewer came into it; never half or a quarter so bad.

2128. You think the river was cleaner when the sewage came into the river at Hertford than it is now?—Yes, a deal cleaner; because you see when there was a flood the water could then get out to rinse the mud away, but now when there is a flood it all comes down the other way.

2129. Then when all the sewage of Hertford came into the river, the river was cleaner than it is now?—Yes.

2130. Is it your opinion that the water between Hertford and Ware got so much cleaner by running, that it was better then at Ware than it is now?—It got cleaner when there was a heavy flood.

2131. How far is it from Hertford to Ware by the river?—Two miles.

2132. Then running down two miles, notwithstanding all the dirt went in at Hertford, the river was purer at Ware?—Yes.

2133. I am

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2133. I am speaking generally of the river; is it your opinion that when the river ran at ordinary times, it ran purer to Ware before the Mainfold Ditch than it does now?—A deal better.

2134. Is it your conviction, from what you have seen, that the river running two miles cleansed and purified the sewage from Hertford?—Yes.

2135. So that it was then purer at Ware than it is now?—Yes, I am quite certain of that.

[The Witness withdrew.

Mr. *Wilkinson.*] The witness would not probably know that Hertford was not sewered; at that time there was a system of cesspools.

Chairman.] Do we understand from you, that in consequence of the New River Company having made these works, the sewage of Hertford has all been altered to flow into these works, and that formerly it was under different conditions?

Mr. *Wilkinson.*] That is so. I think the honourable Chairman has already obtained from the last witness the fact of the increased flow of the river. Under the old system, there was an increased flow of two or three miles, as contrasted with the present flow of the Mainfold Ditch, which comes down through a distinct stream.

Chairman.] I understood that all that came down from the town of Hertford before this ditch was made, came down from the natural river; going all round the course of the natural river.

Mr. *Joseph Chuck*; Examined by Mr. *Wilkinson.*

Mr. *J. Chuck.*

2136. You, I believe, reside in High-street, Ware?—I do.

2137. You are out of business, are you not?—Yes.

2138. Has your attention been directed to the River Lee lately?—It has; I see it every day.

2139. Have you a summer-house at the bottom of your garden which overhangs the Lee?—Yes.

2140. And gives you a peculiar facility for noticing its state?—Yes; I have a window that looks upon the river.

2141. Will you be good enough to tell the Committee the state of the river, according to your observations, at the present time?—It is in a very bad state; it is in a very filthy state, large masses of scum constantly floating down, which I have traced as coming partly from the banks at the mouth of the Mainfold Ditch, and partly from the ditch itself.

2142. I should have asked you the precise position of your house; whereabouts upon the Lee is your house?—The summer-house overhangs the river.

2143. In what part of it?—About 300 yards from the mouth of the ditch.

2144. Is it the higher northern part of Ware, or the southern part of Ware?—It is in the High-street, the southern part of Ware; about the centre of the town.

2145. Do you live below that portion of the town of Ware at which any discharge of the Ware sewage takes place?—I live about 100 yards below where the Ware sewage comes in.

2146. Is that the whole of the Ware sewage?—No, only a part of it; the old watercourse.

2147. Shall I be right in calling that a small proportion of the sewage of Ware?—Yes, decidedly so.

2148. Is the river where your house is situate influenced almost exclusively by the sewage of Hertford?—Decidedly by the sewage of Hertford.

2149. The sewage of Ware bears a very small proportion?—Yes.

2150. Go on with your description of the river?—I cannot say more than I have said.

2151. Have you been annoyed by the effluvia?—Yes, frequently.

2152. Have you gone down the river and collected the scum?—Yes.

2153. Has your attention been directed to the Mainfold Ditch itself?—Yes, I have been into the Mainfold Ditch and collected the scum from it and dried it.

2154. Tell

2154. Tell me what was the condition of that scum?—The stench from it was as bad as you could possibly conceive.

2155. Did that stench indicate that it was fæcal sewage matter?—Decidedly.

2156. Is it a fact that the Mainfold Ditch discharges itself into a piece of still water?—Yes, almost still.

2157. Was it in that portion of it that you found the smell the worst?—That is where it was the worst; when I have been up there in a boat I have found that the very worst part of the river.

2158. I presume that would have the effect, of course, of poisoning the rest of the river?—Of course it would, naturally.

2159. You heard the fishermen talking about gudgeon; do you know anything about that?—I used to take them by thousands at one time, a few years ago, some nine or ten years ago; but for the last few years not one is to be seen or caught by any chance.

2160. Is it the fact that the nuisance has been so great that you and your family have been obliged to leave the garden?—Constantly; it has happened very much so within the last four or five years.

Cross-examined by Mr. *Stanhope*.

2161. How far is your house from the outfall of the Hertford sewage?—I should think 250 or 300 yards.

2162. I want to know how it is you are able to tell the Committee that this scum comes more from the Hertford works than it does from Ware?—Because I have got into my boat and rowed up the river and traced it as coming directly from the Mainfold Ditch, that is why I know it.

2163. But still some part of what you get undoubtedly does come from Ware?—No, I do not think it does; the principal collection is on the opposite side from the Mainfold Ditch, that is where it collects.

2164. You are below this outfall of Ware; how is it you do not get the sewage from Ware?—You do get some portion of it, no doubt; a small portion.

2165. Where does the Ware sewage go if it does not come to you?—About 200 yards lower down the river from me.

2166. I do not understand, still, how it does not happen to come to you?—It cannot flow up the stream.

2167. What do you say as to the state of the river close to your house, compared to what it was 15 years ago, before these works were made?—The water is of a different colour, and smells differently; there is a huge mass of this scum, I really do not know what else to call it, which at certain times, when there are easterly winds, is driven in just at the bend of the river; when there is an easterly wind it flows down as far as this bend, and then stops and collects three or four yards round.

2168. Do you consider it worse now than before these works were made?—Yes, very much worse, and it gets still worse every year.

2169. Before these works were made the sewage was poured into the river at Hertford, and then you had no reason to complain of the state of the river?—No, I think not.

2170. Do you use the water for drinking purposes at all?—No.

Re-examined by Mr. *Wilkinson*.

2171. I understand you to say that where your house is situate there is a portion, but a very small portion, of the discharge of the sewage from Ware?—About 60 or 70 yards above me; it may be 100 yards.

2172. Is it a fact that that discharge is brought down by the mill stream?—Of course when the tail water of the mill comes down it is all cleared away and gone.

2173. Do you think it a very appreciable addition to the Hertford sewage, which is the main cause of the nuisance?—I should never feel any annoyance from it whatever, it would be all washed away at once.

2174. *Chairman.*] Are you aware of the point where the Hertford sewage comes

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comes into the Mainfold Ditch from the Hertford works; do you know that point?—Yes, I know it very well.

2175. It flows there through an artificial open drain, does it not?—Do you mean where it comes into the river?

2176. Into the Mainfold Ditch?—I do not know anything about the Hertford works at all; I have not been up so high.

2177. Do you know where the drains from the sewage works intersect the Mainfold Ditch?—I do not; I have not been up so high as that.

2178. How far have you traced the Mainfold Ditch?—I do not think I went further than 200 yards up the ditch; I merely went up to collect this filth from it, and to examine it.

2179. Is the water in the Mainfold Ditch to a considerable extent stagnant?—I do not know; I have not noticed it many times; when I saw it the scum was coming floating down.

2180. Is the ditch an extremely muddy, dirty, stagnant ditch in appearance?—No, it does not look so; the water looks pretty clear.

2181. Does the water flow clean through it?—The water flows clean through it and bright. I have taken the water out and examined it, and the water seems clear and bright.

2182. Clean and bright, flowing along the Mainfold Ditch as far as you have traced it up?—Yes, as far as I have traced it up.

2183. And you traced it up for about 200 yards?—Yes.

2184. Were there weeds growing in the Mainfold Ditch?—Yes.

2185. And rushes?—I cannot answer that; it is some two years ago since I was there.

2186. How broad is the Mainfold Ditch?—I should think about four yards broad.

2187. And how deep?—I cannot say; I should think it is four feet deep in the middle.

2188. Is there a volume of water gradually flowing along that ditch?—Yes.

2189. Did it appear to you to be a flowing stream?—I cannot answer that question; I cannot recollect whether it was flowing or not.

2190. Do you know what period of the year it was that you saw the Mainfold Ditch upon the occasion you mentioned?—Yes, it was in the month of July.

2191. Was it the very hottest weather?—The very hottest weather; this sewer has been a constant source of complaint to the Local Board of Health, of which I am a member, and that was the reason why I went up to examine this scum; it has been constantly complained of.

2192. What is the size of the river where the Mainfold Ditch joins the river?—It is rather broad just at that point.

2193. It is after it receives the Stort into the Lee?—No, the Stort is five miles below this point.

2194. Mr. *Powell.*] How far is the entrance of the Mainfold Ditch into the river above your house?—Two hundred and fifty or three hundred yards.

2195. Is that so?—I have never measured it; I merely speak from memory, but I should say so.

2196. Have not you gone up more than once to see the outfall?—Yes, many times.

2197. I ask you, because your evidence hitherto has given us the result of one visit?—I have been up many times.

2198. The result of your evidence is intended to be not that which has come from one visit, but that which has come from many visits?—Decidedly.

2199. You do not confine it to what you found to be the case in the month of July, but what you have found to be the case ordinarily?—I have been there three or four days, thinking I might have to give evidence.

2200. Is your evidence as applicable to the season of the year, when you would expect to find the river full, as it is in July, when you would expect to find the river lower than ordinary?—I should think it would be worse in July than at any time.

2201. Taking your evidence as a whole, is it so applicable to an ordinary season as it is to an exceptionably dry season?—I think it is always so, even in the winter season, when there is plenty of water.

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2202. You stated that there was some flocculent matter on the surface, or that you could scarcely see the water?—At certain times when the wind is in the east, this scum flows just round by my summer-house; it is just in a bend where the water is still; it flows to there and stops.

2203. Is that flocculent substance offensive?—Yes; extremely so.

2204. In what sense, to the eye or the nose?—Both to the eye and the nose; it stinks abominably.

[The Witness withdrew.

Mr. *James Collyer*; Examined by Mr. *Wilkinson.*

Mr. *J. Collyer.*

2205. I BELIEVE you are a Maltster, residing at Ware?—I am.

2206. You are accustomed to boat a good deal on the River Lee, are you not?—Yes; I have a boat on the Lee.

2207. You know, I presume, the Mainfold Ditch?—Perfectly well.

2208. That is just below the Mill Lock, and the piece of still water?—Yes.

2209. Tell me, when you have been in your boat on the River Lee, in what state you have found that portion of the river?—The piece of dead water is generally covered with scum in large lumps sometimes half as big as your body, and at other times as big as the top of your hat; different sized pieces floating about.

2210. Has it been so disagreeable as to compel you to leave?—We never go up that part, beyond where the mill stream comes in.

2211. Generally, as a resident in Ware, do you confirm the evidence of Mr. Chuck; did you hear him give his evidence?—Yes, it is generally a great nuisance, the stuff that comes out of that ditch.

2212. Are you aware that it is the Hertford sewage that causes it?—Decidedly it is. You can trace these things right up the ditch, where they come out of the Mainfold Ditch.

2213. *Chairman.*] Point out where that stuff comes in. Is it below the town of Ware?—No; it comes in above the town of Ware. The mill-stream comes in by a piece of dead water; between the mill lock and that point this stuff always collects.

2214. Do you mean where the stream comes in, or where it comes out?—The mill tail comes and joins the navigable part of the river above Ware.

2215. Is it above or below Ware?—It is above the part that Mr. Chuck alludes to.

2216. Mr. *Powell.*] Your remarks apply to the part above Ware?—Yes; where the sewage comes in is a piece of stream above Ware, just below the first lock; that is between Ware and Hertford.

Cross-examined by Mr. *Stanhope.*

2217. Where is the part that you go in your boat?—Just between the two locks, the whole way between the two locks.

2218. Is it below the point where the sewage of Ware comes into the river or not?—We used to go up there, but the river is so bad now that we do not go up.

2219. Is the point where you boat below where the sewage of Ware comes into the river?—Yes.

2220. Now as to this piece of dead water; how long is this piece of dead water which you speak of?—Between 200 and 300 yards, I think, between the lock and the part where the mill-stream comes in.

2221. I suppose you have boated in other parts?—Yes.

2222. Have you any complaint whatever to make of those other parts?—We have never noticed it so much as we do in that one piece of water.

2223. You know, I suppose, about the management of the works?—I do not know anything of the system.

2224. But you know who manages them?—I do not; I know that they belong to the New River Company, that is all I know.

[The Witness withdrew.

Mr. *Alfred Manser*; Examined by Mr. *Wilkinson.*

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2225. I BELIEVE you are a Miller, residing at Hoddesdon?—I am.

2226. Did you, on the 19th of April, make an inspection of the River Lee?—I did.

2227. Let me direct your attention to the part below the Ware Mill Lock; do you know that point?—I do.

2228. Mr. *Powell.*] Ware Mill Lock is below Ware?—Yes.

2229. Mr. *Wilkinson.*] Just describe to the Committee where Ware Mill Lock is situated?—Ware Mill Lock stands a little above Ware, a mill that is up the stream of the town of Ware.

2230. With reference to the Mainfold Ditch, where is that?—The Mainfold Ditch comes in immediately below the lock.

2231. Then when you speak of Ware Mill Lock, you speak of a point above the point at which the Mainfold Ditch comes into the river?—Yes, I do.

2232. Now give us your description of the water there?—The water coming down the Mainfold Ditch, the sewage, was very black and filthy, and stunk very much, and it had the appearance to me of not having been filtered; I do not say that it had not lime in it, but it had not the appearance of being filtered; fæcal matter was there.

2233. Was it a nasty colour; a slate colour?—It was a sort of blackish slate colour.

2234. Full of nasty floating matter?—Yes; full of as nasty matter as you could well conceive.

2235. Did you go up the Mainfold Ditch itself?—I went a little way up that day.

2236. And with what result?—I saw some stuff, and was satisfied that it was the stuff from the works.

2237. Did it satisfy you that that impurity was caused by the refuse matter of the Hertford sewage works?—Yes.

2238. Did you go to Stansted Lock?—Yes.

2239. Is that three miles lower down?—Yes.

2240. On the same day?—Yes.

2241. And there did you find the water pure?—Very much purer. I went over the whole ground again yesterday.

Cross-examined by Mr. *Stanhope.*

2242. You say that it did not appear to be filtered at all; but are you aware of the system under which the Hertford Sewage Works are managed?—Yes.

2243. And that the New River Company are responsible for carrying it out?—I have always understood so.

2244. Do not you live on the banks of the Lee?—I live on a tributary of the Lee, about a quarter of a mile from the Lee.

2245. How far is the nearest point of the Lee to you from these works?—I should think if it was measured it would be four miles. I should think it would be six and a half miles taken by the river, and four miles by road.

2246. I believe you often drink the water of the Lee at the point near where you live?—Yes, I do.

2247. I believe you often have done so?—Yes.

2248. I believe you have no objection whatever to use the water for drinking purposes?—None whatever; my foreman always drinks it, and so they do at the public-house close by.

2249. You do not find any objection to it?—No; I have drunk fresher water.

Re-examined by Mr. *Wilkinson.*

2250. You live on a tributary?—Yes.

2251. Do you get your water filtered?—No.

2252. Sir *George Bowyer.*] Do you drink the water of the Lee or the tributary?—I do not drink either; I drink the spring that runs into the tributary.

2253. You

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2253. You do not drink the water of the Lee?—When I go down to my further mill, if I am thirsty, I have a draught of water.

2254. That is the water of the Lee?—Yes.

2255. Which is the best of the two waters, the water of the spring, or the water of the Lee?—The water of the spring.

2256. You prefer it?—I do.

2257. You would not drink the water of the Lee if you could get any other water?—Yes, I should; I could drink a glass of water as I went down to the further mill; but I have no objection in the ordinary way to drink the water of the Lee, at my Charlton Mill.

2258. Below the filtering works?—Yes; six miles below the filtering works.

2259. Mr. *Powell.*] Your foremen drink the water as you do, now and then?—They have no other water to use.

2260. Mr. *Benyon.*] They live at the lower mill?—Yes, on the river; there is the public-house close by; they do the same.

[The Witness withdrew.

Mr. *Nathaniel Cobham*; Examined by Mr. *Wilkinson.*

Mr. *N. Cobham.*

2261. You are a Solicitor, residing at Ware?—Yes.

2262. You are also Clerk to the Local Board of Health for the district of Ware?—Yes.

2263. You gave evidence before the River Commission in 1867?—Yes.

2264. On that occasion you complained of a good deal of injury to Ware, occasioned by the sewage from Hertford?—Yes.

2265. Is it within your knowledge that the New River Company in their Act for which they applied to Parliament some years ago, obtained power to convey the sewage away to a piece of land, and that they purchased a piece of land to take the sewage down as an alternative to constructing their works at Ware?—They did.

2266. *Chairman.*] What Act is that?—That is the Hertford Sewage Act, 15 & 16 Vict. c. 39.

2267. Mr. *Wilkinson.*] What section?—I have not got the section.

2268. Then they had an alternative, instead of doing as they do now, deodorising; they came down to a place called Amwell Village?—Yes.

2269. *Chairman.*] Would the Amwell Marsh be above or below the present place?—Two miles below.

2270. And two miles below the Mainfold Ditch?—Yes.

2271. Instead of availing themselves of the power of purchasing land, they adopted the alternative of erecting the works at Ware?—They did purchase a portion of land, I know.

2272. And they did not use it?—They did not use it for the purpose.

2273. Instead of that they substituted the present works?—Yes.

2274. Mr. *Wilkinson.*] Have you found the present works at this present day as great a nuisance as they were when you gave evidence in 1867?—Quite as great.

2275. Have you taken the opinion of Counsel as to your means of remedying that nuisance?—For some years past it has been a constant annoyance; there was complaint to the Board of Health of this nuisance, and in 1865 they desired me to state a case for the opinion of Counsel, Mr. Lush, and he advised upon it; he recommended that the New River Company should be indicted if the nuisance was carried out.

2276. *Chairman.*] Will you read the opinion?—The case and the opinion are as follows:—"By the 17th Vict. c. 39 (a local and personal Act declared public and to be judicially noticed), intituled, "An Act to enable the New River Company to construct certain sewers, drains, and other works, in and near the town of Hertford, and for other purposes." The company were, by Section 5, authorised to make and maintain (amongst other works) monthly, a sewer or drain, commencing in the parish of St. John, Hertford, in a road leading to Kings Meads, at a point where the sewers or drains, fourthly and eighthly thereinbefore described, terminate and unite, and terminating in the parish of Great Amwell, in the county of Hertford, in Amwell Marsh, by a junction with

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the River Lee navigation, at or near the lower side of Amwell Marsh Lock, which said intended sewer or drain will pass from, through, or into the several parishes, townships, and extra-parochial and other places of Saint John, Hertford, Ware, Great Amwell, and Little Amwell, or some of them all in the county of Hertford. And it was provided (sect. 7), that the company if they thought fit might make the ninthly described sewer, or drain, to terminate by any outfall into such part of the Mainfold Ditch lying below the Tumbling Bay, then fixed and standing across that ditch, as is within the limits of the deviation marked on the plans deposited for the purposes of the Act, and might forbear to make such part of that sewer or drain as would be between that outfall into Mainfold Ditch, and the proposed junction of that sewer or drain with the River Lee navigation, at or near the lower side of Amwell Marsh Lock. And it was provided (sect. 8), that the company should not at any time discharge or permit any sewage or sewage water, to flow from any part of the sewers or drains, by the Act authorised, immediately or mediately into any part of the River Lee, or of the River Lee navigation, until after it had been subjected to the process of purification, as therein prescribed; and by section 40, it was provided that the Act or anything therein contained, should not take away, lessen, alter, abridge or prejudice any of the rights, powers, authorities, or privileges of the Ware Local Board of Health, under the Public Health Act, 1848, or any Act incorporated therewith. The New River Company, under the powers vested in them by their Act, made the several sewers they were authorised to make, and amongst others the sewer or drain ninthly referred to; but in making that sewer they did not carry it into the Amwell Marsh Lock, but made it to terminate as they were empowered to do, by an outfall into the Mainfold Ditch, beyond the district of the Ware Local Board of Health, into which ditch consequently a considerable portion of the drainage from the Hertford sewage is conveyed, and from thence it flows into the River Lee, within the district of the local Board; by reason whereof, in consequence of some defect in the process of purification of the sewage, or from some other cause, the water of the river is fouled to a very considerable extent, and at times almost insufferable stenches arise from it, to the annoyance of persons residing in the neighbourhood, and tending to the injury of the health and comfort of the inhabitants, and unless the nuisance be promptly abated, serious results may be feared. By the Public Health Act, 1848 (11 & 12 Vict. c. 63), it is declared and enacted (sect. 65), that nothing in that Act should be construed to render lawful any act, matter, or thing whatsoever, which but for that Act would be deemed to be a nuisance, nor to exempt any person from any liability, prosecution, or punishment, to which he would have been otherwise subject in respect thereof. A copy of the New River Company's Act is left herewith, and your opinion is requested, whether any and what proceedings can be adopted by the Ware Local Board of Health, to prevent the fouling of the water of the River Lee within their district, and for abating the nuisance arising from the Hertford sewage flowing into it. And generally on the best course for the Local Board of Health to pursue. I am of opinion that if the accumulation of sewage matter is so offensive as to be injurious to the health of the inhabitants, and if this arises from the neglect of proper known means of purification, the New River Company are liable to an indictment, notwithstanding the provision of their Act, which refers to the Board of Trade any difference upon this question between the Company and the River Lee Trustees. I also think that such a prosecution may properly be taken up by the Board of Health of the district; but as the trustees of the Lee Navigation have special and summary means of stopping the nuisance, I think the duty properly belongs to them of setting the Board of Trade in motion; and I advise the Board of Health to memorialize the Trustees, and endeavour in this way to procure an abatement of the nuisance before taking any proceedings themselves.—*Robert Lush.*—Temple, August 12th, 1865." I may say that I have on several occasions, made applications to the River Lee Company about it.

2277. Mr. *Wilkinson.*] You find the process now adopted insufficient, and you suffer as much injury from the sewage of Hertford as before?—I do not think we suffered much the first two years; but now it is a fearful nuisance.

2278. Is the nuisance increasing?—Yes.

2279. *Chairman.*] We understand that your town has never made any application to the Board of Trade, in accordance with the advice given by Mr. Lush?—No;

—No; instead of that we applied to the New River Company, and to the Clerk of the Trustees of the River Lee. We thought we should get no relief from the Board of Trade.

2280. It was thought so?—It was thought that an application to them would have to be made in a round-about way.

2281. If any parties are interested in the water, do not you think that the inhabitants who live on the banks of the river are interested?—Very much.

2282. Why do not they, under this Act, make direct application to the Board of Trade?—It has been a matter of consideration whether they should not take proceedings.

2283. Why did they not, in accordance with the advice given by Mr. Lush, being parties interested in the water, make an application to the Board of Trade?—They thought an application of that kind would be a round-about way.

2284. Why did not they take the direct way indicated by the Act?—I had no instructions to do it, and therefore I did not do it. I cannot say why.

2285. Are we to understand that the Local Board had Mr. Lush's opinion brought before them, and that they had the provisions of this Act brought before them, and that they gave you no instructions to act according to that opinion as the result of their deliberations?—They did not. I am bound to say, with reference to the Board of Health, that I did not advise them to do it, and they gave me no instructions.

2286. You gave them no advice, and they gave you no instructions; nobody did anything at all. And for three years you have been suffering this nuisance since the opinion was taken?—Yes.

2287. You have done nothing to relieve yourselves from your suffering condition?—No.

2288. Sir *George Bowyer.*] Did you make these applications to the Trustees of the River Lee?—Yes; and I applied to the New River Company. I have seen some of the officers of the New River Company, and they said that there is some mistake as to the sewage coming down without being properly purified.

2289. It was your business to make application under the Act, supposing they did not do it?—No doubt it was.

Cross-examined by Mr. *Stanhope.*

2290. I understand you to say, that the first two years after these works were made, the process was better carried on, and you had no possible objection to it?—My attention was not called to that.

2291. Mr. *Powell.*] Do you live on the river?—No.

2292. *Chairman.*] When you looked at the Mainfold Ditch, did you go up the Mainfold Ditch at the point where the artificial drain runs into the Mainfold Ditch?—I know it well; I used to bathe there when a boy.

2293. You did examine it fairly to that point?—Yes.

2294. Did you, on the occasion of your inspection, find the water running through the artificial drain into the Mainfold Ditch in a somewhat filthy state?—I have seen it.

2295. You have seen it in a filthy state?—Yes.

2296. Is the Mainfold Ditch very much larger than the section of the ditch, as compared with the artificial drain?—It is larger.

2297. Very much?—Yes; I may say much larger.

2298. Does any other water come into the Mainfold Ditch than that which flows from the artificial drain?—There is a little surplus water from the River Lee which does not pass into the New River.

2299. That is the overflow?—Yes.

2300. Does it drain much of the marshes just between the New River and the entrance of the artificial drain?—No, except at flood times.

2301. It takes off the flood water?—Yes.

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2302. Otherwise it does not take anything but what comes from the artificial drain?—No.

2303. And the artificial drain expanding into the larger channel becomes somewhat slackened in force necessarily?—Yes.

2304. You have seen it almost stagnant in the Mainfold Ditch?—There is not a great stream in the middle of the summer; it is almost stagnant.

2305. With a very small imperceptible flow?—Yes, the Mainfold Ditch comes into a piece of still water, and then there are three streams after you come down into the River Lee.

2306. It is the tail water of the lock into which it comes?—Yes.

2307. And the tail water comes into the river below the Mainfold Ditch?—It runs almost parallel with it. (*The Witness explained the plan to the Committee.*)

2308. *Chairman.*] Then the tail race of the mill comes into the stream below the Mainfold Ditch?—Yes.

2309. Therefore it is a piece of dead water between the bottom of the lock and the junction of the tail race of the mill?—Yes.

2310. It comes into the river there?—Yes.

2311. Sir *George Bowyer.*] Do you find that the nuisance remains the same, or does it get worse?—I think it has got very much worse of late.

[The Witness withdrew.

Thomas Rawlinson, Esq.; Examined by Mr. *Wilkinson.*

T. Rawlinson, Esq.

2312. CALLING your attention to the answer which you gave to my learned friend, Mr. Sargood, in cross-examination on the 24th April, I find this—"Your attention has been called to the question of deodorising by lime. I suppose if that process took place, it would not require so long a distance for the material to travel through the water, in order to become partially pure, would it?—If you take out of sewage water all that can be extracted by the liming process, that is, all the solid and all the flocculent matters, you take away, probably, nine-tenths of its power to do mischief, and you would unquestionably remove, perhaps, nine-tenths of its mischievous effect from the stream into which it passes; it is not so much the water that causes the mischief, as it is the solid matter." With reference to that question and answer, have you any explanation which you desire to offer to the Committee?—I would preface it by reminding the Committee that, in my evidence in chief, I stated that, within my knowledge, there was no known chemical means of rendering sewage anything but sewage by any amount of these chemical clarifications. But when I gave the reply there, I prefaced it by saying, if all the solids are removed, and I must confess that I had in my mind in giving that answer more the appearance of the stream, the clarification and purification of the appearance of the stream, than I had of the stream as a supply for drinking purposes, because in all my evidence and in all my report-writing I have never failed to say that sewage cannot be clarified so as to be fit to go into a stream which is subsequently a water which is to be drunk; but in taking away the whole of the solids, and I qualify it by saying the whole, you take away that which coats the bank, which accumulates upon the bank, and which goes on under such a sun as this fermenting, and in that case, nine-tenths of the mischief to the stream you have removed, by absolutely taking away all the solids removable. I said nine-tenths because there will, to a certain extent, by fermentation taking place from clarified water, which you have clarified in the most perfect manner. If it is in a sluggish stream, and especially in a stagnant pool, the subsoil will give off gas and rise up in scum to the surface. That is the explanation that I have to give.

2312.* I gather from that that your meaning would have been more readily expressed by a question which my learned friend put to you, at Question 130, when he says, "I have got it down to 1-10th the annoyance"?—That is exactly the meaning that I wish to convey; that if you have got rid of 1-10th of possible and palpable annoyance in the stream; but in no way, as I have said, over and over again, have you effected a chemical composition of the sewage which goes away in the clarified water.

2313. Sir *George Bowyer.*] What made you say 9-10ths?—Taking the streams of

of Yorkshire, where they are as black as ink, and where we should very probably, if our Commission had lived to have made a general recommendation, taking out the solids of the dye woods, the solids of sewage, and the solids of the manufacturing districts, you will take away probably 9-10ths of that which gives the foul appearance to the water.

2314. Did you hear the evidence of Professor Way?—I have not heard it this morning; I know Professor Way's opinions.

2315. Mr. *Wilkinson.*] And you have already given evidence upon this point at a later date, on the 30th of April; is there anything which you desire to add with reference to the proposed exemption of Luton and Hertford from the general operations of the Act?—No; I think that as this is the commencement of legislation upon this question, a clear case ought to be drawn, that where a large population is supplied with drinking water from a stream similar to the River Lee, above the intake of the water companies, sewage should be excluded as far as possible; sewage such as this in Luton and Hertford and other towns unquestionably will then get below the intake; then it is a question of expediency. And you may then be contented with clarification, if there is nothing but navigation purposes to be served, because if you set up a standard that no sewage shall go into any stream on any conditions, I mean if Parliament even got that into its head, it would annihilate the trade of Lancashire and Yorkshire, and wipe out 5,000,000 of the population of this country. Under no conditions could you carry out such a restriction.

2316. Sir *George Bowyer.*] You think Parliament ought not to require an impossibility?—Yes.

2317. Each case must be considered by itself?—Yes; I have been found great fault with by the Thames Conservancy and the River Lee authorities, for my evidence. But I say now, unhesitatingly, having inquired into the question as a Rivers Commissioner, that the Thames would not be injured, in my opinion, by the admission of clarified water from both sides of it, down below the intake of the water companies.

2318. Mr. *Powell.*] Is the intake in the tidal portion of the river?—No, the intake is above Teddington Lock; and when you come to legislate for the great rivers of Yorkshire and Lancashire, and other manufacturing districts, you will have to come to some such conclusion.

2319. *Chairman.*] You want to have rational and practical legislation there as elsewhere?—Yes, you must do so; I do think it is quite possible to be more nice than wise. Look at the Thames as it flows past here. I know that attempts have been made to injure my opinions, and I have been spoken to privately about having given evidence before this Committee.

2320. You do not suppose that common sense is to be superseded by imaginary theories of chemistry?—No.

2321. Mr. *Powell.*] Let us have your opinion distinctly and categorically upon two points; first as regards Luton, as a member of the Rivers Commission, are you or not of opinion that Parliament ought to allow the Luton people to pour into the River Lee the clarified sewage?—I am clearly of opinion that they ought to allow no such thing.

2322. I ask you the same question, and wish a categorical answer in reference to Hertford?—My opinion as regards Hertford is the same.

2323. Sir *George Bowyer.*] You are an engineer, and not a chemist?—I am.

2324. You would not put your opinion against Professor Way on the question of chemistry?—No; Professor Way and myself have been acting together for 10 or 12 years. We were members of the Royal Commission for the Utilization of Sewage, and joint members on the Rivers Commission. We have been in concert for 10 or 12 years.

2325. Do you differ with the opinions of Professor Way?—No; not at all.

2326. You perfectly agree with Professor Way?—Yes. If I did differ from Professor Way I should think twice before I contradicted him. I would rather think myself wrong than him, on the question of chemistry.

[The Witness withdrew.

Mr. *Wilkinson* stated that he wished to call an engineer, to show that means could be adopted for dealing with the sewage by irrigation without discharging it into the river.

Mr. *William H. Lucas*; examined by Mr. *Wilkinson*.

Mr. *W. H. Lucas.*

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2327. You are a Civil Engineer, carrying on business at Westminster, and a member of the firm of Lucas and Wilkinson?—Yes.

2328. You have directed your attention, have you not, to the mode of using sewage upon land by irrigation and precipitation, so as to render the water, ultimately, perfectly clear and pure?—Yes.

2329. You laid out some works for West Ham which were not ultimately carried?—Yes, they are now before the Board,

2330. Have you laid out plans for Hornsey and other suburban places?—Yes.

2331. Those have not been carried into operation? They have not been carried out.

2332. Have you also laid out works for Stroud?—We have been engaged in the adaptation of the works originally designed for the lime process. They have been adapted as near as possible for the present patent system of dealing with sewage.

2333. Stroud is a town with a population of 10,000?—From 8,000 to 10,000.

2334. Are you prepared, if the Committee desire it, to give the details of the plan you would carry out there?—Yes, in a very few words.

2335. Will you explain it to the Committee?—By a process which has been patented, the sewage, on flowing from the outfall culvert, turns a sort of wheel, which, by very simple action sprinkles clay powder on it, driving it a little beneath the surface, so as to wet the powder. This powder is treated chemically with a certain acid, and being poured into a tank the clay powder acts mechanically by attracting the small particles to it, and by its weight carries them to the bottom; the acid decomposes the sulphide, and thoroughly deodorises the residue; the lighter portions float to the top, and from the centre, or about two-thirds down in depth from the tank, there is an orifice by which it passes through a coarse filter; it passes through the filter, is again treated with the powder, and a second precipitation takes place in another tank; then the tail water passes through a second filter into the stream from which it has been, to a certain extent, diverted. It is perfectly clear, and from 20 analyses I believe it has been found to contain from 16 to 24 grains of organic matter in a gallon; but it is perfectly clear and inoffensive, and there is no smell whatever at the works or outfall.

2336. Has the result of the process been proved at Stroud to be efficacious to clear the ultimate residue completely?—Before three years ago, when the other system was in vogue, a great many complaints and legal processes were instituted, but since that time where the system has been carried out, there have been no complaints, and the residue has been treated as a base for manure, for which a large sale is obtained in the West Indies.

2337. Do I understand your process exhausts the whole of the sewage matter upon the land itself; does it discharge any liquid again into the river?—It discharges the water containing 16 grains to the gallon.

2338. In what way does it discharge, after percolating through the surface of the land?—It is recommended that that should be done; it has not been considered necessary to do it, but it is recommended that irrigation be adopted.

2339. Stroud is near Cheltenham?—Yes.

2340. Sir *George Bowyer.*] I understand that the process you have described is not irrigation at all?—It is precipitation before irrigation.

2341. If you precipitate before irrigating, does not that precipitation very much impair the value of the sewage for irrigation purposes?—That is a matter of opinion.

2342. What is your opinion about it?—My own opinion is that it would do so.

2343. That the process of precipitation would much injure the sewage for irrigation purposes, and injure the value of it for agricultural purposes?—It would be rather weaker.

2344. It will be valuable for agricultural purposes?—For applying upon a less quantity of land.

2345. You

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2345. You think it would be better to apply the sewage to the land without precipitation?—I am not prepared to say that.

2346. Is it not the consequence of what you said before, that precipitation renders the sewage less valuable for agricultural purposes than it would be without precipitation?—On an equal quantity of land.

2347. Never mind the quantity of land, that is another question; it is less valuable for agricultural purposes after being subjected to precipitation than if it had not been subjected to precipitation. I think you said it was not so valuable after precipitation?—It is not so strong.

2348. And not so effectual for agricultural purposes?—That would depend very much upon the crop proposed to be raised.

2349. *Chairman.*] You are describing a certain process that has been carried on in works that you have constructed?—During three years.

2350. And that the water that comes out of these works goes into the river and is not inconvenient to anybody?—No; fish live there. But it is proposed by the company for which these works were carried out, that irrigation should be used for the tail water.

2351. Sir *George Bowyer.*] What is the annual expense of these works of yours?—£.400. or 500*l.* a year. They have paid for themselves.

2352. Do they produce anything?—They produce a manure for which, though a new thing, a sufficient sale has been obtained to repay the cost of the works and plant.

2353. Does it recoup you for your annual expense?—Yes.

2354. Mr. *Powell.*] What do you mean by cost of works and plant; the interest on the capital?—The interest with the necessary sinking fund, which is being provided.

2355. *Chairman.*] How big is the river into which this water flows after it has undergone this process?—I cannot give you the exact dimensions; I should think 60 or 70 feet wide.

2356. What river is it?—It is the River Stour.

2357. How deep is it?—I do not think I could give you any certain information upon the subject.

Cross-examined by Mr. *Stanhope.*

2358. Are the works now being carried on at Stroud?—Yes.

2359. How long is it since you were at Stroud?—Five weeks.

2360. You found no complaint of this system?—I heard of no complaint of the system.

2361. It is at present being carried on?—Yes.

2362. *Chairman.*] What is the quantity of water that is discharged from the works in 24 hours?—I should think about 240,000 gallons in a day.

2363. In the 24 hours?—In the 24 hours.

2364. Sir *George Bowyer.*] Is that water of the Stour ever used for drinking purposes below the point at which the clarified sewage flows into it?—I am unaware. I should imagine it was, as it is some height up the river.

2365. *Chairman.*] The valley below is very populous?—It is very populous.

[The Witness withdrew.

Professor *Alfred Swaine Taylor*; Examined by Mr. *Sargood.*

Professor *A. S. Taylor.*

2366. You are a Fellow of the Royal College of Physicians?—I am.

2367. You are a Professor of Chemistry and Medical Jurisprudence at Guy's Hospital?—Yes.

2368. I had the advantage of reading an extract from a report which you made in the year 1866 as to four samples of water taken at Hertford?—Yes.

2369. Do you remember that?—Yes.

2370. Have you your original report here?—I have.

2371. I will just read a few words to you; at page 135 of the second report of the Commissioners, at the bottom of the page, you will see this: "The result of this analysis shows that the four samples of water are good, wholesome, and

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fit and proper for the supply of the town for drinking and ordinary purposes;" have you seen any reason to alter the opinion you then expressed?—No.

2372. I believe you are at this moment occupied in making analyses of the two samples of water from Luton, such as those which I had the honour of producing to the Committee the other day?—I do not know where they came from, but I had two samples delivered to me at the laboratory yesterday. I know they were marked Luton No. 1, and No. 2.

2373. You are not able to tell me, from analysis, their constituent parts?—Not from a complete analysis.

2374. When will you be able to tell it?—I shall finish the analysis to-morrow afternoon.

2375. I think you have had a good deal of experience as to the water about Hertford and that district?—I have had experience generally.

2376. You understand the process of purification by lime?—Yes.

2377. In your judgment, does the effluent water which passes into the river after that mode of purification, and after travelling down some 10 or 12 miles of the river towards the water taken in the neighbourhood of Hertford, contain anything which in your judgment is pernicious to life or to health in any appreciable degree?—From my analysis it does not.

2378. You are of opinion, therefore, that water of that description, after undertaking the process I have mentioned, may be safely ejected into the river without danger to life and health?—If that process has been properly carried on, and the matter is discharged and circulated with a large body of water into the river to the distance you have mentioned, or even a shorter distance than you say, it would be deprived of all power of doing any harm to any person.

2379. You agree with the other professional gentlemen, that, as an abstract proposition, the water is not perfectly and entirely pure?—It is not absolutely pure.

2380. But you also agree with me that the amount of impurity is not such as to be injurious to other persons?—It is not; on the contrary, it is about the average of good water.

Cross-examined by Mr. *Clerk*.

2381. The lime process removes the solid and flocculent matters, does it not?—Yes.

2382. Let me ask you this; is it not the nitrates which are in solution in sewage water which are the most noxious to health?—Certainly; and I might add that they always indicate where they are in quantities; there is a large amount of sewage impregnation.

2383. The presence of nitrates always indicates the presence of sewage?—Or the presence of nitrogenous matter, not necessarily sewage.

2384. Nitrogenous matter of a character injurious to health?—I cannot say that; because the grass which grows on the banks of a stream contains a large quantity of nitrogen.

2385. I see by inquiry you made in 1866, that a distinction is drawn between water from the Well New Works and water from the River Lee Old Works?—Yes; in the one, though there is organic matter, there is nothing that indicates the presence of any nitrates.

2386. What do you say in that report which you make regarding No. 1?—Of all the waters "No. 1, by reason of the small proportion of saline matter in the gallon, and from its entire freedom from the oxidised products of organic matter (alkaline nitrates) takes the first place."

2387. You say, "It has evidently not been exposed to any source of contamination"?—Yes, that is so.

2388. Then you go on to say, "Of Nos. 2 and 3, it may be observed that although they have a constitution similar to No. 1, they acquire from some source small quantities of mineral and organic substances which add to the proportion of solid contents after the water has issued from the well. Of the letter A, or Lee River water, it may be said that its composition is very similar to that of No. 1, but it is inferior to it in these respects, the organic matter contains sulphur

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sulphur and nitrogen, and the mineral matter alkaline nitrates, showing that as a result of exposure this water has acquired nitrogenous organic matter which, by conversion into ammonia and subsequent oxidation, has produced nitric acid." Did that indicate to you that the matter had undergone some contamination from sewage matter?—No, not from sewage matter, but nitrogenous matter.

2389. If you were apprised of the fact, that sewage matter had been discharged into the river, and in analysing the water of that river you discovered nitrates, would not you, as a chemist, attribute the presence of the nitrates to the sewage water?—Not necessarily, if the sewage water had to traverse 20 miles.

2390. In what sense would the nitrates be disposed of?—The mere washing from the banks of the stream; the leaves and grass which get into the stream all contain nitrogen, and by decomposition produces just the same results in the water as the sewage does. If these had depended upon sewage, the quantity would have been much larger than a mere trace of nitrogen in an imperial gallon.

2391. What length must sewage travel in water in order to get rid of the poisonous effects of the nitrogenous matter?—That would depend upon the volume of the water, and its exposure to the air; but a very short time would cause the oxidation.

2392. If there was a river and place, a discharged sewage, within a certain distance, you would say that that sewage might get oxidised, and become harmless?—Yes; that is by diffusion.

2393. But if down the river you have places B, C, D, E, and F, all discharging similar sewage water, where does that water become harmless and fit for drinking?—I would always form my judgment irrespective of that, by the amount of nitrates present; because I feel certain of this, from the analysis of a large quantity of waters in the country, that if we reject water because it contains traces of nitrates, there would not be one water in 20 that would pass muster.

2394. You say that you may find traces of nitrates even in water where you know there is no sewage?—Yes; I could not undertake to say in any single case, whether the nitrates in the water resulted from sewage or vegetable matter, containing nitrogen; but if any water contained a large proportion, say two or three grains, so that the residue would dissolve gold with great facility, I should draw the inference, if the nitrates were in large proportion, that the nitrogen was most probably derived from decomposed animal matter.

2395. This matter has been a great deal discussed in the public institutions of late years in London. Is it not the fact, that the presence of two grains of nitrogen in water induces chemists to look with suspicion upon the water?—Yes.

2396. I find in your analysis here, you say "of organic matters with nitrogen and sulphur, and matters volatile at a red heat, 3·2"?—That does not represent the nitrates.

2397. What was the proportion of nitrates in it?—They were really too small to be determined; I should think not probably more than a quarter of a grain in an imperial gallon.

2398. You have not allowed for that at all?—No; I should never mention the nitrates unless they were in a large and considerable proportion.

2399. Have you in any other matter?—No; it is only a calculation of traces; I believe nitrates are now found by chemists simply because they look for them; water contained them formerly, but the testing for nitrates was not so perfect as now.

2400. Do you agree with many chemists, who allege that there are sewage matters remaining in the water which no known chemical process is, at the present time, able to distinguish?—No; that is not in accordance with my view. I deny the existence of what cannot be discovered.

2401. You know that many chemists say that?—I do; and I differ from them. If a chemist is unable to detect and separate any noxious matter in water, and if a physiologist is unable to show that the water has the least action upon any animal, it is impossible to say that it is noxious. We do both. Supposing we cannot find a noxious thing, we use an animal to see whether the article itself is noxious.

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2402. *Chairman.*] Do you admit that, if water were given, apparently pure, to a dozen healthy people, and after drinking it they all died in 24 hours, that would not amount to a discovery that there was something noxious in the water?—I do not say as far as that. What I understand Mr. Clerk to ask me is this: whether I admit the existence of subtle noxious principles in water which a chemist cannot discover, or which cannot be discovered by any process, in a sufficient quantity to damage health or destroy life? I say no to that, certainly.

2403. Mr. *Clerk.*] That opinion is held by many chemists and professors of the present day?—I have heard it said, not by many, but by some.

2404. Sir *George Bowyer.*] Supposing, in point of fact, the water did injure the health, although you could not discover anything in it by which you could account for the bad effect which it produced, you would nevertheless acknowledge that the water was unhealthy?—Then I should find it unhealthy by chemical examination.

2405. Supposing the chemical examination produced no result whatever?—I cannot suppose that. I have had to analyse water, for the last 37 years, from all parts of the country; and, as a rule, we know what the average quality of wholesome water is. If I find the water containing upwards of 40 or 50 grains in an imperial gallon, of solid contents, and four or five grains of organic matter, and especially if there are nitrates with it, I do not care to inquire what the influence is upon the population; I say at once, it is not wholesome water. But as I found the water of the River Lee, when I examined it, I should pronounce it good. I do not believe that that water could do mischief.

Cross-examined by Mr. *Wilkinson.*

2406. Did you take this water yourself?—No; there were four samples sent to me by the Corporation.

2407. I speak of the water you are now engaged in analysing?—That is another water. That analysis is not complete.

2408. I presume in the analysis which you make, in which you are responsible, you yourself collect the water?—I do; myself or my assistant does.

Re-examined by Mr. *Sargood.*

2409. Your analyses are simply made in 1866; they were made for the Hertford Corporation on a perfectly independent inquiry, in consequence of the state of the health of the town?—The water was sent to me.

2410. I suppose your belief in the power of chemistry would amount to this, that if a dozen people were poisoned after drinking a certain sample of water, you would not believe it arose from the water unless a chemist could discover it?—I would not; there must be something in it. The effect upon any person, even if he swallowed sewage water in the state in which I examined it, would only be to produce vomiting. He would throw it off his stomach and there would be an end of it.

2411. With regard to nitrates, my learned friend, Mr. Clerk, was good enough to read the first part of a sentence; I will read the end of it: "The nitrates, however, are so small in quantity as not seriously to affect the water for drinking purposes. The nitrates are generally found in river water in inhabited districts, but commonly only in traces;" that is so?—Yes.

2412. You still adhere to that opinion?—Yes. I have found nitrates in water coming from even 150 feet down in the earth.

2413. As to the differences of opinion between chemists, upon which you have been asked, let me call your attention to what Dr. Letheby said upon these words upon which Mr. Rawlinson was examined; Dr. Letheby said, "There is no doubt that the present system of discharging the sewage of towns into rivers is a very improper system, although the water has a very wonderful power of purification when it is freely exposed to the atmosphere over a run of seven or eight miles. Take, for instance, common sewage going into 20 times its bulk of good river water; in the course of a run of seven or eight miles it becomes so purified that nothing of sewage can be discovered in it by chemical means, and such

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such water may be used under ordinary circumstances for domestic supply for years and years without any injurious effect being perceived;" do you agree with him in that?—With the qualification that it would depend upon the amount of sewage and the amount of water. But I may state this as a fact, that in 1850 and 1851, when these matters were much inquired into, water was collected at the outlets of some of the sewers here about the streets, and some at London Bridge while the tide was running down. I examined it particularly for my own satisfaction, to see if I could discover any of this very noxious effluvia in the water near London Bridge. I have invariably found it oxidised in this short transit. I discovered sulphuretted hydrogen in the water near Hungerford Bridge pure, but at London Bridge all the sulphuretted hydrogen had disappeared. I do not say that the water in that state would be wholesome, nor do I understand Dr. Letheby to say so. It would depend upon the amount of sewage.

2414. *Chairman.*] What we gather from you is, that the whole would seem to be a question of relations and degree?—Yes.

2415. That if you pour a certain quantity of sewage into a river of a certain size, it would have no prejudicial effect after it had run a certain distance?—No; in the river it will aerate.

2416. Having stated your general proposition, have you had your attention directed to the volume of water that is passed from the sewage works at Luton, and the volume of the river at that place, and the length and the breadth and run of the river for 20 miles?—I have only a very rough notion about it; I made inquiry upon that point.

2417. Give us the notion that you have conceived, and, next, your conclusions from it?—Will you allow me to tell you that there is a great mistake about the nature of sewage water. I should explain that the Corporation of Leicester sent me 13 samples of four gallons each of sewage water taken at different periods of the day. There is a notion in the public mind that there is an immense amount of solid matter in it; but the solid matter on the average does not exceed 1-1400th part.

2418. Is it about the composition of pure urine, that it has about 50 parts in a thousand, or 45 parts in a thousand, of solid matter?—40 parts; I have analysed two samples in the last two days, and it contained 4 per cent., not of uria, but of solid matters.

2419. Capable of being detected by simple analysis?—Yes, or its product; uria we cannot detect in water, it is turned to ammonia.

2420. If the result of your analysis is that there are only two parts in 70,000, would there be any possible resemblance between the two things; you only found two parts of organic matter in 70,000 parts in the river?—That would be in 1-35,000th part; that would be the result of admixture with a large volume of water.

2421. Would the 1-35,000th part bear any comparison to 40 in 1,000 as to be able to identify the one water in any way with the other?—No, I think not in any way; on the contrary, I heard Professor Way state, and I quite agree with him, that there is nothing so readily decomposed as urine; it contains the principal uria, and with much nitrogen, which is speedily converted to ammonia; so that the uria is very soon changed to carbonate of ammonia, and when that is the fact, the carbonic acid fixes the lime in the water, and goes down as carbonate of lime and ammonia. The ammonia remains in the water, it is not dissolved, but by evaporation and exposure to air, part is lost as vapour, and part is oxidised and converted into nitric acid, and forms the nitrates of which we have been talking.

2422. Having reference to the consuming power of these matters of aquatic plants, and the growth on the bank of the river and the soil through which the river runs for 20 miles, do you think that the solid matter in the outfall at Luton would be decomposed and recomposed into something else?—I believe it would, long before it reached that length. If there was a want of care in the discharge at the works in a shorter distance, the water might go on and be oxidised.

2423. Do you think, when you arrived at the end of 20 miles, you would be quite sure whether your organic matter had come from the aquatic plants, or from the fish, or from the sewage?—It would be impossible to say, but if it were in such small quantity as I found, I should certainly not say that it came from the sewage.

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2424. You think it just as likely to come from the aquatic plants, and the organic matters on the bank of the river, and the fish?—Yes.

2425. Where we are dealing with such a small quantity as this to eliminate them into the river we must get rid of all the fish, of all the marine plants, and all the frogs, and everything else?—Yes.

2426. Is it your opinion, when nature is left to itself, that the counteracting chemical resources of nature bring matters back very much to their original condition?—That is undoubtedly the case, unless we step beyond nature and overdo the work.

2427. Having been told the quantity that flows from Luton, do you think that by the time it gets to Hertford the Luton sewage is perceptible?—I should think in 20 miles it would be impossible; because if it is five feet in depth, and 12 feet in width, that will give 60 cubic feet of water for every foot of the bank, and it will be about 400 gallons for every foot; there are 5,000 feet in a mile.

2428. If it were expanded into lakes, or broad pieces of water, in its progress, would that assist the action of decomposition and re-composition?—Yes.

2429. The greater the growth of vegetable matter in the water the more complete is the decomposition of the substances in solution; the greater the amount of vegetable matter that grows in the water, the greater the obstruction of the substances in solution in the water?—I do not know that I can quite agree with that view, because the vegetable matters that grow in the water die in the water.

2430. I speak of their growth?—They appropriate some of the carbonic acid of the water, the air, and sulphur.

2431. They decay and grow up again?—They undergo decomposition; the weed that has been spoken of, that green scum, comes on the water when exposed to light; so much so, that the Government ordered all the great reservoirs of water to be covered, and since then the weed has not grown.

2432. What is your final conclusion as to the effect the quantity of matter falling into the river at Luton, considering the length and the breadth of the river, has upon the state of the water at Hertford?—I must answer that question by basing it on my analysis, and therefore in that I cannot see that it has any influence upon it; I am already making an examination, if you wish further information within a short distance of Luton, within two miles of the outfall; but so far as that examination of Hertford is concerned, I have made another analysis of the water above Luton, within a recent period.

2433. I ask you whether your general information now as to the amount of effluent water going into the river, and the character of the river and so forth, tends to confirm or destroy your chemical analysis?—It tends to confirm it.

2434. Mr. *Powell.*] Referring to the answer given by the previous witness, respecting certain flocculent matters he discovered on the top of the water, do you attribute it to the effect of sewage or to the natural vegetation that arises in stagnant waters?—You mean the green confervæ.

2435. I mean whatever the witness alluded to?—He meant a sort of green scum.

2436. Sir *George Bowyer.*] He did not say it was the green scum, he said it was a scum.

2437. Mr. *Powell.*] You heard the witness's answer, and I ask you whether you attribute it to the presence of sewage water, to any form of effluent water, or whether it is a natural vegetation arising in stagnant water?—It is the result of the natural vegetation in the stagnant water, or in the water, because it need not be stagnant; any kind of organic matter, whether coming from sewage, or any other source, will itself become a nucleus for the growth of confervæ; if the water contains no organic matter you have no growth in it; but if it contains organic matter, then in proportion to the amount you have the confervæ produced.

2438. Do you consider that the presence of the substance the witness describes was a proof that the water was unwholesome or unfit for drinking purposes?—I should like to test the water to see whether the weed that impregnated the water was anything injurious.

2439. In the absence of further experiments, you will express no opinion?—I do

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I do not see that the weed itself would be an injury to the water so much as to health, but it might have an unpleasant taste to it.

2440. *Chairman.*] Did you hear the evidence of the engineer just examined, who described the process of treating the sewage with earth and other matters?—Yes.

2441. Has your attention been directed to that process, except what you have heard in this room?—Not that process with earth, but it has by lime, and other matters.

2442. Are you able to form any opinion upon what he described as the process?—I think it would be a very inefficient one, when I tell you that there are 1,400 pounds of water to a pound of solid.

2443. Have you heard of the treatment of sewage with sulphate of lime, instead of carbonate of lime?—Yes.

2444. Has it any different effect?—It is very absorbent; it absorbs to a greater degree; it sets more speedily into it.

2445. Are there any other processes in vogue at the present moment?—There is the chlorine of zinc; that is rather expensive.

2446. There are several processes?—Yes; there is none so effectual or cheap when well conducted, as lime.

2447. The ordinary burnt lime?—Yes, because when the lime is put into the water it turns to carbonate of lime; and in Dr. Clarke's patent for purifying the water of London, he adopted the principle of adding lime to water, to form carbonate of lime, which subsided, and formed solid matter.

2448. It took the mineral matters in solution?—Yes; when thus treated the water, even if yellow and thick, becomes almost pellucid.

2449. What is your opinion of the proportion of injurious matter taken out of the water by the lime?—It depends upon the amount of sewage.

2450. Supposing the treatment were the best method known to you, about what would be the proportion taken out?—I find in reference to what was published as regards Leicester, that about 5-8ths were taken out; but I ought to put these details before you, namely, that all sewage contains matter in suspension, which properly ought to be allowed to fall first, then the lime added afterwards, takes down a great deal more which was held in solution. If the person adds lime to a quantity of turbid water, he is in doubt as to how much goes down mechanically from its subsidence, and how much from its chemical effect.

2451. Your opinion is that the lime so applied to the water takes down that which was otherwise held in solution?—I have no doubt about it.

2452. Can you tell us the proportion of matter held in solution taken down by the lime?—Will you allow me to read a paragraph here which has reference to the sewage water of Leicester. "It will be perceived that if lime be used for the purpose of purification (of sewer matter), then the quantity of deposit obtained from the same quantity of sewer water is more than doubled. It is certainly desirable that lime should be employed for aiding the separation of the deposit, not only because the quantity is thereby greatly increased and the solid portion is more rapidly precipitated, but because the offensive odours of the sewer water is at the same time almost entirely removed. The resulte prove that no injury is done to the deposit by the use of lime, and it is not thereby rendered less valuable for the purposes of manure." So that it is more than double from experiments here. But I find that the sewer water differs in the amount of solid contents, both organic and mineral. Of course it would depend upon the water.

[The Witness withdrew.

Mr. *Denison* was heard to address the Committee on behalf of his clients.

A question having arisen as to the mode of procedure,

The Committee-room was cleared.

After some time, the Counsel and parties were again called in.

Chairman.] The Committee are of opinion that all the five parties must bring before the Committee whatever they wish to bring before them,

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either by evidence or by address, relating to the two questions of the sewage of Hertford and the sewage of Luton, before the Committee take the subject into their consideration to pronounce a decision. Therefore, if there has been any misconception, and they wish to bring any further evidence, and wish to be heard further upon the matter, the Committee will be quite prepared to hear them upon the two questions; but the Committee do not wish to go into the question of contributions to be paid by the water companies to the Board of Conservancy, until they have pronounced their decision relating to these two sewages.

[Adjourned till Tuesday next, at Eleven o'clock.

Tuesday, 26th May 1868.

MEMBERS PRESENT.

Mr. Ayrton.	Mr. Alderman Lawrence.
Mr. Benyon.	Mr. Powell.
Sir George Bowyer.	Mr. Surtees.
Lord John Hay.	Mr. Wise.

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

Mr. *William Sandoe*, called in; Examined by Mr. *Sargood.*

Mr. *W. Sandoe.*
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2453. You are an Architect and Surveyor at Luton, and have been already examined in this matter?—I have.

2454. Have you gathered two samples of water, one from the river, and the other from the pipe discharging from the Luton works, for the purpose of delivering them to Professor Taylor?—I have.

2455. When did you do that?—On Friday, the 19th instant.

2456. You have marked them Nos. 1 and 2, I believe?—No. 1 and No. 2.

2457. Does No. 1 consist of the effluent water as it comes out of the pipe, from the works, before it has come in contact either with the earth or the river?—Before it actually leaves the works.

2458. Before it actually gets clear of the works themselves?—Yes.

2459. We may call that the effluent water, if I may use the term, "in its purity"?—It works a water-wheel after the place where I took it, that is to say, it has to work a wheel which works the machinery after it leaves these works.

2460. I only want the Committee to understand that that water is as it comes from the works, before it has compounded itself with anything else?—That is the case.

2461. Did you take the No. 2 sample out of the river itself?—Out of the river.

2462. Whereabouts?—Near new Mile End station.

2463. Tell me whereabouts that is, with regard to the park of Mr. Lee?—It is about half a mile on the London side of Mr. Lee's park.

2464. *Chairman.*] Half a mile below his park?—Yes.

2465. Mr. *Sargood.*] I believe some inquiry was made by one of the honourable Members as to the water after it had passed the park, and you therefore took it from there?—Yes.

2466. Is that about two miles from the pipe out of which you took No. 1 water?—About 2½ miles.

2467. Now, did you deliver those two samples of water in the state in which you had gathered them into the hands of Professor Taylor himself personally?—I did.

2468. Now, at Mr. Lee's park, where you took out the No. 2 sample, is the river about 35 feet wide?—That is the exact figure.

2469. Did you measure it yourself, for the purpose of this inquiry?—I did.

2470. And is it of the depth of three feet?—That is the depth of the water.

2471. What is the width of the river where it passes Mr. Lee's park, at the centre of the park?—About 250 feet.

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2472. Did you make this measurement on Friday, the 22nd of May last?—Yes; on Friday.

2473. And gathered the waters on the same day?—No; it was the day after.

2474. At the time you measured the river, you had an opportunity of seeing what was going on in it?—I had.

2475. Did you see any fish there?—A very large quantity; just where the effluent water from the works joins the river, there were a vast number of fish.

2476. So far as you could see, were they in a state of health and happiness, as you would wish fish to be?—Yes, they were; I should liked to have caught some of them very well.

2477. Sir *George Bowyer.*] What sort of fish were they?—I do not know; there were various sorts of fish, about three or four inches long.

2478. What was the sort?—I do not know; I am not a fisherman, and do not understand it.

Cross-examined by Mr. *Davison.*

2479. What time of the day was it that you took these last samples?—I started from home at half-past six in the morning.

2480. How long did it take you to get there?—It was about 10 minutes, or a quarter of an hour before I took the first sample.

2481. What time did you take the second?—It was 20 minutes to eight when I took the last sample.

Mr. *Denison.*] I have nothing to ask you.

Re-examined by Mr. *Sargood.*

2482. Are your sewage works going on all day and night?—All day and night.

2483. And are they constantly discharging at about the same rate this effluent water?—Yes; we have a night man; we keep a man on purpose.

2484. Therefore the discharge of water would be about the same at all periods of the day and night?—It would be the same.

Dr. *Alfred Swaine Taylor,* called in; Examined by Mr. *Sargood.*

Dr. *A. S. Taylor.*

2485. You have completed your analysis to which you referred when you were here last?—I have.

2486. And you have seen the printed copies of the Report that you have made?—Yes.

2487. I need scarcely ask whether you are prepared to state to the Committee that that Report of yours is correct in your judgment as a chemist?—

The *Chairman.*] You can take a pen and ink and correct it then, if you like.

It is a mere printer's mistake in using the word "effect" instead of "affect."

2488. Mr. *Sargood.*] I believe the document that you have before you is the Report which you made?—Yes.

[*The same was handed in, and is as follows:*—]

"REPORT of Analysis of Two Samples of Water marked, 'Luton, No. 1 and No .2.'

"A gallon of each sample was delivered to me at the Chemical Laboratory, Guy's Hospital, by Mr. Sandoe, on Tuesday, May 19th, 1868.

"The waters had no smell or colour. No. 1 was turbid from some undissolved whitish substance floating in it. This was deposited as a sediment on standing. No 2 was clear and colourless, and deposited on standing a slight sandy sediment (samples producible).

"Half

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"Half a gallon of each water left a brownish coloured residue on evaporation. The dry residues when heated became black, owing to the presence of organic matter. This was more marked in No. 1 than in No. 2. Ammonia and nitrous acid escaped from both, but more from No. 1 than No. 2, and in addition a trace of sulphur was detected in the residue of No. 1.

"No noxious effluvia or gases were found in either sample; ammonia was obtained from them in small quantity by distillation. The proportion was greater in No. 1 than in No. 2. There was no trace in either sample of the compounds which render sewer waters noxious or poisonous, namely, the sulphide of ammonium and sulphuretted hydrogen.

"The composition of each sample, calculated for the imperial gallon of 70,000 grains, was as follows:—

	No. 1.	No. 2.
"Mineral matter, consisting chiefly of carbonate and sulphate of lime and common salt, with alkaline nitrates and oxide of iron in small quantity	21·6	14·4
"Organic matter and matters volatile at a red heat	3·8	2·0
"TOTAL solid contents in imperial gallon in grains	25·4	16·4

"*Conclusion.*

"The sample marked No. 1 exceeds in the weight of solid contents and of organic and volatile matters the average of good water as it is now supplied to London and most provincial towns. It contains ammonia and alkaline nitrate in a proportion larger than it is customary to find them in good potable waters. It contains nothing of a noxious nature or likely to injure health; and, having regard to its chemical compositions, I am of opinion that a water like No. 1, discharged into a river of sufficient volume, cannot injure the water, or, at a distance of from 15 or 20 miles from the point of discharge, so affect its properties as to render it unfit for the supply of a town. During the passage it would be diluted and diffused, and the organic matter would be oxydised and in part removed by free exposure to air.

"It would be well for the Thames, and for London generally, if only water like this were discharged into the river at Crossness, in Erith Marshes, in place of the unchanged excrementitious matters of three millions of people.

"In sample No. 2, the solid contents are in smaller proportion than they are usually found to be in the Thames, New River, and other waters supplied by the water companies to London (21·3 grains in the gallon). This remark also applies to the Rivers Chess and Colne. No. 2, however, contains alkaline nitrates (less than No. 1), but in larger proportion than they are usually found in good river water. By dilution and diffusion the difference would disappear. The nitrates found in No. 2 were in very small quantity. They represent converted nitrogenous matter, but whether of animal or vegetable origin, it is impossible to state.

(signed) "*Alfred Swaine Taylor*, M.D., F.R.S.,
"Professor of Chemistry and Medical Jurisprudence in Guy's Hospital.

'75, St. James's Terrace, Regent's Park,
22 May 1868."

2489. Now, having had an opportunity of making that analysis, let me ask you more particularly with regard to the water. No. 1 water, we have been told, is the actual effluent water itself before it mixes with the River Lee?—Yes; I poured off a sample before I made the analysis; I shook the bottle so as

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to get the average, and that is a sample of the water which I took from No. 1, as delivered to me by Mr. Sandoe, and this (*referring to another sample*) is a sample of the water marked "No."

2490. I need scarcely ask you, for your analysis answers the question, perhaps; has the water No. 1 been improved in its transit to the point of the river from which it was taken as No. 2?—Very much so.

2491. Allow me to ask you as a chemist; from your analysis of this water, is there anything which is absolutely poisonous or noxious in the sample that you have had submitted to you?—In the sample or samples?

2492. I will take both?—There is nothing which I should call pernicious and noxious, which would materially affect health.

2493. Not in either of them?—Not in either of them. There is a sediment in No. 1, but that sediment is harmless in its nature, and I found no matter noxious to health in either of them.

2494. Do you believe that that which might or would be noxious in the sewage matter before it has undergone the liming process, has, in consequence of that process, been removed to that extent?—It has; and some of the products of the decomposition of sewage appear in it in the shape of nitrates.

2495. Now I believe the sulphuretted hydrogen and sulphate of ammonium are the only noxious things in sewage?—Sulphide of ammonium and sulphuretted hydrogen are the noxious ingredients. They are entirely gone, and so far as science will enable us to say, the only very poisonous ingredients that are in sewage are sulphuretted hydrogen and sulphide of ammonium.

2496. Have you gone into the question at all with regard to measurement of the river, as to what bulk of water has become mixed with the sewage?—I made a slight calculation from what I heard the other day——

Mr. *Denison* objected to the witness being examined upon general questions, it having been understood that he was only to give his evidence upon the analysis which he had prepared.

The *Chairman* stated that the answer might be given.

The *Witness.*] That would be about a million gallons of water in a mile to a gallon of sewage discharged at the works; therefore, a gallon of sewage discharged at the works, in passing a mile, would be more or less diffused and mixed with a million gallons of water, taking it according to what I have heard stated.

2497. Sir *George Bowyer.*] You are assuming that only one gallon of sewage is discharged and mixed with a million gallons of water; but that is not so, because we are told that it is running night and day; so that it will not do to say that one gallon of sewage is mixed with nearly a million gallons of water?—No; only I say that, taking No. 2 as a fair sample of the effect of the admixture of the sewage discharged, I suppose that to be so.

2498. Supposing that one gallon of sewage is discharged into a million gallons of water, you say that that sewage would be perfectly innocuous?—I should say so. I think if only a gallon had been discharged, I should have found no particular difference.

2499. Mr. *Sargood.*] You take the discharge that is alleged to exist at Luton, and the result of your analysis is of that particular amount of discharge, whatever it may be?—Yes; of course it would be the amount then discharged.

2500. I believe it has fallen to your lot to make an analysis of the waters supplied to some 26 large towns in England?—

Mr. *Denison* again objected that this was a general examination into the case, and that it ought to be confined strictly to the analysis.

The *Chairman* stated that Mr. Sargood had only reserved to himself the right of supplementing the evidence by examining Dr. Taylor upon his analysis, and that these matters would all be found in the report of the Committee on the East London Water Bills made last year.

Mr. *Sargood* stated that he was only going to give the Committee another feature of the case, and was not going into the same thing again; that Professor Taylor had made an analysis of 35 different species of drinking water, and

and that it was desirable that he should give the Committee the comparison between those analysed, and that at Luton, and tell the Committee how many of them were worse, and how many better.

The *Chairman* stated that it would be all found at page 313 of the Blue Book, and that Mr. Sargood had better confine himself to the point reserved to him, which was the analysis; but that if he thought proper, he might put the question in a general way.

2501. Mr. *Sargood.*] It has fallen to your lot to make an analysis of some 35 samples of drinking water?—Yes, in 1866.

2501*. Comparing Luton water with this, just tell me in one word, if you can, how many of these waters did you find better and how many worse than Luton water?—Do you mean the No. 2 water?

2502. Yes, the Luton No. 2?—I find from the list I have that 21 were approved of and 14 condemned as unwholesome and unfit. I had an opportunity in this analysis of comparing the New River water with two or three waters sent to me at the same time, and I found that this water No. 2, with the exception perhaps of the nitrates being in a little larger proportion, comes quite up to the character of good New River water; it is as good, as I have said before, with the exception of the nitrates being in rather a larger proportion, and it is quite as good as any of the 21 of which I approved, and infinitely better than the 14 which I condemned.

2503. Sir *George Bowyer.*] I am rather curious to know which are the ones which you condemned?—I can give you a list of them. Those which were the worst of all were from the Inns of Court.

[*The List referred to was handed in, and is as follows:*—]

"Corrected List of Waters Analysed by Dr. *Alfred Taylor*, in the Year 1866, a year of Cholera Panic.

Samples.	Examined.	Approved.	Condemned
Wellingborough, Northamptonshire	3	3	—
Folkestone	3	2	1
Gibraltar, for Peninsular and Oriental steamers	1	-	1
Colchester	2	-	2
Eltham, Kent	2	1	1
Alfreton, Derby (fever)	2	-	2
Melbourne, near Royston	1	1	—
Inner Temple	2	1	1
Lincoln's Inn	1	-	1
Gray's Inn	4	1	3
West Middlesex Water, N. W. District, London	6	6	—
Corporation of Hertford, Well Waters and River Lee Water	4	4	—
Hertford Gaol (for Magistrates)	2	-	2
River Chess, Rickmansworth	1	1	—
River Colne	1	1	—
	35	21	14

"*Note.*—The condemned Inns of Court waters, which contain in quantity the oxidised excrement

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excrement of the streets and the washings of the great manure bed which underlies the pavement of London, were cut off from the public after the report of their quality was sent in. They have been again freely opened for public use, the fear of cholera having departed.

"The Hertford Gaol waters contained the nitrates and ammonia, not merely of the drains and cesspools of the place, but of the washings of the dead bodies of the criminals who had been buried there."

2504. Mr. *Sargood.*] Now a good deal has been said about the nitrates that have been found on analysis, and as to their quantity being greater or smaller; in your judgment is it the presence of nitrates that is really the principle cause of the unwholesomeness in the water?—It is one cause, but I will not say the principal cause; the principal cause would be the decomposing of organic matter: but certainly that is one of the causes of unwholesomeness of the water. It is a salt which creates irritation of the bowels, and is liable to give rise to dysentery, and in times of cholera anything which brings about an irritation of the bowels predisposes to the disease.

2505. Did you find these nitrates in such a quantity as in your judgment to be positively injurious to health?—No; I have endeavoured to estimate the quantity, but the amount is not more at the most than half a grain in a gallon. Here is the quantity of nitrate which would be represented by a gallon (*producing a small packet*), and I took for this purpose the worst sample of the two. That represents half a grain of an alkaline nitrate to the imperial gallon; that would be the full quantity contained in the first of these two samples.

2506. That is the sample No. 1, which of course no one ever thinks of drinking, or has the means of drinking?—There are people in London who drink much worse water than that; but I ought to show the honourable Chairman this (*producing a specimen*), which is part of the dry residue extracted from No. 1, which represents the quantity of matter contained in eight and a half ounces of the effluent water. It is a brownish white powder.

2507. Sir *George Bowyer.*] Of what is it composed?—Carbonate of lime, sulphate of potash, oxide of iron, and the general ingredients.

2508. Can you analyse air as well as water?—Oh, yes.

2509. Can you analyse air as completely as you can analyse water?—No; I think not quite so completely. It is very difficult to analyse air.

2510. I have seen the results of subjecting air to the microscope, and showing various things floating in the air. Those things which float in the air are well known matters. It is ascertained what they are?—Yes.

2511. You can analyse air?—If we separate the solids.

2512. But you can analyse air?—Oh, yes.

2513. Can you detect in air the poisons, we will say, of typhus fever, or any other disease?—No; not by any chemical process.

2514. You say that in air there may be a poison, but you cannot detect it by any chemical process?—No.

2515. May not the same thing be in water; may there not be poisons in water which you cannot detect by a chemical process, but which may yet be noxious?—If that were so, though we might not be able to detect it by chemical process, yet we could detect it by its effects upon animals.

2516. I understood you to say, that if you find that persons, after drinking a particular water, become ill and die, you still would not believe there was any poison in the water, unless you could detect that poison by chemical analysis?—I have repeatedly known illness to be produced from water, but I have always been able to detect the cause of that illness. I have had to examine water for our troops at Aden; dysentery broke out there some years ago, and the water was sent to me to examine. It looked as clear and colourless as possible, and anybody not acquainted with chemistry would think it very good water, but, on analysis, I found the cause of the dysentery was that the water contained a large quantity of oxidised magnesia.

2517. As in air, there is poison which cannot be detected by chemical means, so in water there may be poisons which cannot be detected by chemical analysis?—By chemical analysis, no; but a chemist does not always judge by that. He can always judge of the effect of water by administering it to animals. I never saw an injury produced by water in which a chemist could not say "this water was unwholesome," and he would say it must not be drunk.

2518. That is not the case with air?—We do not know what the particles are that run floating about in the air, and we cannot isolate them; we cannot test them

them; it is like the poison of the rattlesnake, for which there is no test whatever, but it will kill a man in five minutes if introduced into the tissues of the body, although it may be swallowed without doing any harm. I should like to add to that, for your information, that having for a good many years analysed waters, I have been consulted in cases where they have unfortunately produced illness, and I have found on analysing them, a sufficient cause for the illness. In other cases they have been said to produce illness, but on analysing I have found them perfectly wholesome, and have told the parties that the illness must be referred to something else. I never knew, in the hundreds of cases in which I have analysed water, of water free from colour, taste, and smell, and free from organic and saline matters, which has produced any injurious effect.

2519. But would you not, as a physician, prefer water into which no quantity whatever of sewage was emptied?—Of course I should prefer water to which nothing has been added, if I could get it.

2520. You would wish no sewage to go into the water?—I should wish nothing to go into it if we could get it without.

2521. You would not say because the quantity of sewage is very small, "I do not care about it," but you would rather have the water without any sewage at all?—I would rather have water that has not been contaminated with anything, but if I found water good on analysis, I should not hesitate to drink it.

2522. Supposing you found these nitrates in the water, or anything else indicating the presence of sewage, would you say that the water was not so good as water in which there were not those indications?—Certainly.

2523. You would prefer that water should be entirely preserved from all contact with sewage rather than speculate upon the smallness of the quantity of sewage?—Certainly.

2524. *Chairman.*] Anybody can get water of that description, I suppose, who chooses to catch rain-water in a pure atmosphere?—I never found even rain-water pure when it has to come through the atmosphere of London.

2525. I said in a pure atmosphere?—There would be some nitrates even in rain-water, because nitrate of ammonia exists in the atmosphere.

2526. Sir *George Bowyer.*] You would rather have water into which no sewage is discharged. You would prefer that no sewage whatever should be discharged into water?—I certainly should prefer to drink water out of a river into which nothing has been discharged.

2527. I suppose you could not as a physician positively say how small a particle of the noxious fluid might do some injury to some parts of the tissues of the human body?—Yes, I could. With regard to those 35 that I analysed I did not hesitate about condemning 14.

2528. I am speaking of sewage?—We do not always find sewage in water.

2529. I am taking the sewage only. You would not, I suppose, give your opinion positively as a physician as to how small a particle of sewage, of the deleterious part of sewage rather, would or would not produce some injurious effect upon the the tissues of the human body?—All I can say is that if I found any trace of sewage or its products in water in any quantity, I would condemn the water.

2530. I suppose as a medical man you cannot say how small a particle of noxious matter in sewage would produce an effect upon the tissues of the body?—I have never known any effects produced.

2531. Mr. *Sargood.*] You have spoken of the state of this water being attributable, as you consider, to the process of lime purification?—Yes.

2532. Have you turned your attention at all to the question of purifying sewage by irrigation?

Mr. *Denison* again objected to Mr. Sargood going into this evidence.

The *Chairman* stated that Mr. Sargood was going beyond the range to which he was confined, and that it was unnecessary further to pursue this matter, because the witnesses for the promoters had said that there might be something in water which they could not possibly discover, and about which they knew nothing, and therefore it followed as a consequence that they could not know anything more about it when it had been used for irrigation.

Mr. *Sargood* stated that he would not press the question.

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Witness.] There was a question Mr. Chairman put to me the other day, as to whether I knew any substance that might improve the efficacy of lime; I have thought of the matter since, and I tell you, from a large number of experiments with lime made before Higgs's patent was at all known, that it is easy to take the foul matters out of the sulphuretted hydrogen water by lime, but there is often left a disagreeable smell, from some matter being left behind, which the lime does not altogether remove; now, it has occurred to me, that the use of the liquid known to the public, under the name of Condy's liquid, which is perfectly innocent, and does no injury to fish, would destroy a great deal of what might be left; supposing the lime were not efficacious, that combined with the lime would be very effective indeed.

2533. Sir *George Bowyer.*] Could it be used on a large scale?—Yes.

2534. What is the expense of it?—I cannot tell you the expense. It is sold in pint and quart bottles; but a wine-glass of it would completely deodorise something like a pailful of ordinary sewage water, apart from what the lime had done. Now, I have performed another experiment with regard to this water, No. 1 and No. 2. I added a little more lime; but all I have done with regard to No. 1 water in this bottle has been to add a small quantity of lime, to allow the matter to be deposited, and to take it out with a little carbonic acid; and that is the state of the water (*pointing to a bottle*); showing, therefore, that lime does make a very great improvement. I must also ask you, Mr. Chairman, to allow me to explain one matter upon which Mr. Denison is mistaken. He referred to his having been present in 1851 or 1853, I think; and I well remember him on that occasion; but he rather suggested to the Committee, in reference to one of your questions, that some water taken out at Hungerford Bridge contained poisonous matter of sewage; and that in some taken on the same day below London Bridge, between that and the Tower, the poisonous gas had been entirely removed by the transit through the river, allowing for the sewers and the sewage between that and the bridge. Mr. Denison said rather strongly that he remembered all about that bottle of sewage, and that the gentleman took it up and drank some out of it. Now I have preserved that bottle for the last 17 years, and not a particle has been taken out of it; therefore Mr. Denison is indebted entirely to his own imagination for that.

2535. Mr. *Denison.*] It may not be the same bottle?—It is the same bottle that I produced before the Committee in 1861.

2536. *Chairman.*] I thought it was something in the evidence that you wished to explain?—No one else produced such a sample; and this is the very bottle that was produced 17 years ago before the Committee. I was going to say with regard to it, that my statement was this: it was to show, not that the water was drinkable, but that the foul gas was, to a certain extent, oxydised and got rid of within a short space. There was no no object whatever in drinking it.

2537. Mr. *Denison.*] But, nevertheless, some one did drink it?—Nobody drank this, that I know of.

2538. *Chairman.*] There is one question I should like to ask you. We have been told that the fermentation of water is something extremely unwholesome; will you tell me if water is taken from rivers which are considered remarkable for their excellence and purity, and the water undergoes the process of fermentation, it loses its extraordinary pureness and wholesomeness?—Not unless there is much sediment; any water containing much sediment is liable to undergo fermentation; when the gases are given off, the sediment subsides, and then the water becomes clear.

2539. And, therefore, becomes unwholesome?—The result of that depends on the giving off of the organic matter.

2540. Have you directed your attention to the water used by the ships in various rivers?—Yes, I have, and the fact is that very often it is the custom to put Thames water into a cask, which is taken to sea, and which undergoes the fermentation you have described; that is, purifying fermentation. The cask is charred on the inside purposely, and the effect of that is to decompose the foul matters in the water.

2541. Is that wholesome?—No, it is not, by reason of the nitrates that are present. It is unwholesome, like the superficial well waters of London. It would

would appear to be wholesome, but it is in fact unwholesome so long as it contains those salts. Dr. *A. S. Taylor.* 26 May 1868.

2542. Mr. *Powell.*] Do you say it is purified by the cask being charred?—That was done formerly. From the effect of the charcoal the salts disappear.

2543. When water is placed in an iron tank, how does this purification take place then?—It gets more offensive in the iron tank, because iron contains sulphur, and that makes a sulphur deposit, so that it would be necessary that such waters should be treated with the charcoal separately.

2544. *Chairman.*] Will you explain to the Committee, when you spoke of one gallon of sewage being mixed with a million gallons of water, did you mean one gallon of the sewage of the town, or one gallon of actual sewage as it would flow from the human body, or from other foul sources?—I meant a gallon as discharged from the works.

Mr. *Denison* stated that he had a witness to call to verify a statement made by him on a former occasion.

Mr. *James Muir*, called in; Examined by Mr. *Denison.*

2545. You are the Engineer of the New River Company?—I am. Mr. *J. Muir.*

2546. You stated the other day that the Act of 1854, which made the New River River Company adopt Higgs's process, was in the first instance only an Act for diverting the sewage water of Hertford below your intake?—I believe it was.

2547. Was I right in saying that Clause 8 was added to the Bill by the Committee at the last moment?—I can only say that there were alterations made in these clauses, giving them the present form.

2548. I thought you were the man who could tell exactly how that was?—No, it was before my time.

2549. Perhaps you can tell me this: do you know the quantity of water that Hertford takes for its own purposes from the New River?—I believe it has been stated in evidence that we have the power of taking very nearly 200,000 gallons a day.

Richard Ellicombe, Esq., called in; Examined by Mr. *Denison.*

2550. I THINK you were the Parliamentary agent then, as now, when the Act of Parliament of 1854 was passed?—I was. *R. Ellicombe*, Esq.

2551. Can you give the Committee the information which I tried to get from Mr. Muir about the introduction of this 8th clause?—The 8th clause was inserted in Committee on the Bill, and was not in the original Bill in any shape or form.

2552. It was no part of the bargain between you and Hertford?—None whatever, and the 9th clause also.

Mr. *Denison* was heard to sum up the case on behalf of the New River Company.

Mr. *Hope Scott* was heard to address the Committee on behalf of the East London Company.

Mr. *Stanhope* was heard to address the Committee on behalf of Hertford.

Mr. *Sargood* was heard to address the Committee on behalf of Luton.

Mr. *Davison* was heard in reply on behalf of the promoters.

The Committee-room was cleared.

After some time the Counsel and parties were called in.

The *Chairman* stated, that with regard to the town of Luton, the Committee had amended the clause, and had added a proviso to it to the following effect: " or some other process, which from time to time may be in use as

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the best then known practical process for the purposes of sewage, to the satisfaction of the Secretary of State for the Home Department, in case any difference should arise thereon between the Conservancy and the Local Board of Health." With regard to the town of Hertford, the Chairman stated that the Committee had come to this determination: "The Committee determine that unless the New River Company agree to the following arrangement, and insert clauses accordingly, viz., for transferring absolutely to the town of Hertford all the sewage works under the Act of 1854, and for paying in perpetuity an annual sum of 600*l.* a year to the town, and for repealing Clauses 8 and 9 of the Act of 1854, and for placing all the future responsibility of whatever works or processes may be necessary for dealing with the sewage of Hertford in that town; the Committee will pass a clause, enacting that whatever charge or liability may arise from the exercise of any power of the Board of Conservancy over the outfall at the Mainfold Ditch, under the Bill, shall be borne by the New River Company."

[Adjourned to Thursday next, at Twelve o'clock.

Thursday, 28th May 1868.

MEMBERS PRESENT:

Mr Ayrton.	Mr. Powell.
Mr. Benyon.	Mr. Sheridan.
Sir George Bowyer.	Mr. Surtees.
Mr. Alderman Lawrence.	Mr. Wise.
Mr. Maxwell.	

ACTON SMEE AYRTON, Esq., IN THE CHAIR.

UPON the question of the Contribution by the Water Companies:

Charles Henry Parkes, Esq.; Examined by Mr. *Davison*.

2553. MR. RAWLINSON and Captain Tyler are unable to be here to-day?—They are.

2554. The Committee all know that you have had very large experience in these matters; do you think that 1,500*l.*, as a maximum, is a fair sum to be inserted in Clause 88 for the contribution of the water companies?—I am satisfied in my own mind that they will find 1,500*l.* will be barely adequate effectually to put in execution the purposes of this Act in respect to purity, that is, if it is to be done effectually.

2555. Of course the present staff of engineers and other persons employed by the River Lee Trust will all be available, but they would not undertake those duties, of course, without additional pay?—I apprehend you can hardly expect an engineer to travel over the whole watershed, as he would be obliged to do, without additional pay; the cost even of surveys would be considerable.

2556. The first year or two, if anything were to be done under the Act, it would be done at considerable expense?—It must be done at considerable expense, by investigating the works of the towns, and the works at different places, and considering the whole matter practically in an engineering point of view.

2557. Now these two companies pay 3,500*l*, a year at present?—They do.

2558. And this would make them pay, as between themselves, 5,000*l.* a year?—£.5,000 a year.

2559. But then they take pretty well half the whole of the water?—They take half of the whole of the water. As regards a comparison with the Thames, the two water companies take from the Thames about half the supply of London, subject to a little variation which was made by the 10,000,000 of gallons given last year to the East London Water Company; the East London Water Company, and the New River Company together supply very nearly half of London from the River Lee; therefore, taking the two together, with the Thames as a comparison, the two companies do not pay more for their water, or much in excess for their water, to what they do from the Thames.

2560. Do you believe, from what you know of these matters, that in putting that figure into the Bill, it is not at all probable that they will find, when they place their four trustees upon the River Lee Trust, that they have got enough money to work it out?—I really believe they will find that, if they are to incur the chance of litigation, and if they are to employ efficient people, it would be insufficient, because it would be very bad economy to employ inefficient people

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on matters of such delicacy as would be involved in the working of this Act. I really think they would not have too much money.

2561. Now, you have got a batch of clauses there?—Yes.

2562. Mr. *Powell.*] Did you mean 3,500*l.* was the same sum, or nearly the same sum, as is paid by the other companies, or 5,000*l.*?—£.5,000; the present payment by the two water companies is 5,000*l.*, and the East London pay another 1,000*l.*, which is 6,000*l.*

2563. Mr. *Davison.*] On the Thames?—Yes; then they get rather more than half their water from the Thames; the proportion, I think, is stated here; but you may say that half London is supplied from one river, and half from the other river, perhaps a little in favour of the River Thames.

2564. Now, about the clauses, you have them; have they filled in the amount?—Yes, 500 *l.*

2565. Do you think that the Bill could be worked, or would be worth printing afresh, if that were the sum given?—I think that they would have to pause; if that was the only sum applied to this purpose, they would hardly do anything; it would be a nominal Bill, which would create a little terror, perhaps, in the first instance, but like other nominal penalties, would be disregarded in the end.

2566. Their clauses differ in principle, do not they, from ours?—The scheme in the Bill is, to a certain extent, that the purity shall be paid for by the water companies; the scheme in the clauses proposed by the water companies is, that if there are not adequate funds arising from the present funds of the Conservancy Board, including the 3,500 *l.*, then that a Board of Trade auditor shall be appointed, who shall say what sum in addition shall be paid by the water companies, not exceeding 500 *l.* a year.

2567. That is worked out in this Clause F?—Yes.

2568. So that in point of fact they are to pay nothing until there is an arbitrator?—They are to pay nothing until there is an arbitrator.

2569. Whereas your proposal is, that they should pay the sum you propose, and that there should be an arbitrator if they thought they were paying too much?—Just so; I might say that a good many things would have to be apportioned. For instance, at the present time the trustees have no office; it would be impossible to conduct business of this kind down in Hertfordshire; that would have to be apportioned between the two, and therefore some reference to the Board of Trade would be necessary for the purpose of an apportionment of the salaries, to see what is fair to one, and what is fair to the other, and various matters of that kind.

Cross-examined by Mr. *Hope Scott.*

2570. When you say that the payment at present made by the two companies on the Lee is less in proportion than the payment made on the Thames, do you speak of the quantity of water paid for?—I am speaking of the supply to the inhabitants, about half of London.

2571. I suppose you know that storeage reservoirs have been made by the East London Company, and I suppose you know that the New River Company has constructed cuts?—Yes.

2572. And that the actual quantity of water paid for in one case and in the other is very different?—The actual quantity of water paid for is different.

2573. Will you tell us the quantity of water?—The quantity of water paid for from the Thames, the power of drawing, is no doubt largely in excess of the quantity you can draw; but you will have the residue of the water after supplying the navigation.

2574. After the navigation is quite sure?—Yes.

2575. But the case of the Thames is a very large quantity in the first instance, as compared with the first quantity, to the water companies on the Lee?—No doubt.

2576. What is the proportion?—The water companies on the Thames can draw up to 110,000,000 gallons a-day. I believe if they chose they could go to that extent, but they do not actually go to that extent.

2577. What do they do in the Lee?—I think you can get up to nearly 60 millions; 40 millions you do at present; but I am not speaking of what you take, but what you can do.

2578. That

2578. That is to say, as reversioners after the navigation?—No doubt from 40 millions to 45 millions, I think, is what you actually take.

2579. So that in point of fact we are paying in reference to the quantity of water, a much larger sum in the Lee as compared with the Thames?—As regards the physical possibility of getting it, you are paying more largely.

2580. Let me ask you, besides that in the Lee, have any works been necessary, or been constructed by the Navigation Trustees for the purpose of producing this water; is not it all plain gain to them, being water which they could not use, but which their works were adequate to yield to them?—It may be gain to the navigation, but on the other hand taking a comparison between what other towns have to do, such as Manchester and various other places, and the enormous works that they have had to make for millowners, they have been something extreme; the 3,500 *l.* a year that you pay is small, in comparison.

2581. But I put this to you; does it cost the River Lee Trustees a farthing to send us this water, for which they get 3,500 *l.* a year?—No, it does not cost them anything.

2582. In the case of the Thames, was it not alleged that in order to render the Thames more available, the Thames Conservancy would have to make a large outlay to economise the water; the Thames and its works were in a very bad state?—The Thames water being taken just out of the tidal area; I am not aware that that allegation was made.

2583. Are you not aware that the conservators claimed payments upon the ground that the general state of the locks and so forth was bad, and that the contribution of the water companies would enable them to give the supply?—That was in the upper part of the river.

2584. But it was connected with the payment in the lower?—It was taken as a whole question in the Thames; the question of the navigation and the question of the purity were rather too much taken together, from my recollection of it.

2585. You distinctly wish to separate them here?—Yes.

2586. Did not the New River Company pay 40,000 *l.* down, besides, to the River Lee Trustees?—Yes, they did make that payment.

2587. Then, if I understand you rightly, this 5,000 *l.* a-year, which you think ought to be paid, ought to be paid upon a comparison with the Thames; is that so?—I think not, wholly. I think, in dealing with these questions, you must not take the Thames only as a comparison; but you must look upon other towns and other places, and see what works they had to do for the purpose of getting their water, and the compensation they had to give. You must look to the extent of the supply afforded from the river.

2588. But surely that bargain has been struck?—Just so.

2589. You want to alter the bargain that has been struck?—No; I do not think there is any alteration in the bargain, except for the benefit of the water companies.

2590. Now you come to the question of purification?—Yes.

2591. But, surely, if you go on the question of water, we pay enough for our water, in comparison with the Thames. You are putting it as a question that would affect the existing bargain?—I do not think that should be taken much into account.

2592. Now, take the 1,500 *l.* a year; in the 1,500 *l.* a year do you contemplate the total expense of superintending the River Lee and its tributaries?—I think they would not be able to pay it with that money.

2593. To do the whole work with that money?—It is just barely possible; but if they come to questions of litigation, I think they would be very cautious how they involved themselves in litigation.

2594. That is what you take as the total?—We ask it as the maximum.

2595. You said that 1,500 *l.* would be barely adequate; do you mean, to pay for all the operations?—Yes; and for supervision.

2596. I suppose you do not attribute to the present trustees any obligation to purify the River Lee, or to maintain its purity?—None at all; I have attributed nothing to the River Lee beyond their present limits and their present duties.

2597. Within their present limits?—You say whatever comes within their present limits; I say no.

2598. I am very anxious that the Committee should follow us closely here; is

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is the 1,500 *l.* a year which you speak of intended simply for the new limits of jurisdiction, or for purification as a new matter?—At present the purification (save such litigation as has arisen at Tottenham), does not form an essential part of the duties of the River Lee Trustees; they are not bound themselves to keep the river pure.

2599. That is your view of the law?—They are not bound to do more than is necessary for the purposes for which they are constituted under existing Acts; therefore whatever the 1,500 *l.* is put upon is an inclusion in the duties of the conservators of the entire watershed.

2600. Now I quite understand you that the 1,500 *l.* is your calculation of what the total expenses of the conservancy would be in superintending the purity of the Old Lee Navigation now in the trustees, and of all the tributaries thrown upon them by this Bill?—I call it an additional superintendence of the present navigation, because of their putting in force a new law, much more stringent than the present.

2601. Do you or not admit that, according to the extent of their powers, the River Lee Trustees are bound to prevent the flow of noxious sewage into the River Lee at this moment?—Do you mean morally or legally under the statute? Under the statute, I doubt whether there is any obligation that could be enforced upon the trustees, of preventing the flow into the river,—at least, I know of no provision whatever.

2602. That is, legally, as to the obligation enforceable by others. Now let us go to the moral?—I think, morally, the trustees of a navigable river are bound to prevent, as far as they can, and as far as the law will allow them, the flow of noxious matters into the river, especially if it is likely to be injurious to those trading upon it.

2603. And as a matter of interest to the navigation (that is the third case) you think they are also bound to do it?—As far as the law will authorise them.

2604. I suppose you have gone into no detail upon the subject of engineers' salaries; having to travel a great deal—I presume in a dog-cart, that has to be paid for—you have not mentioned any other items except lawsuits?—The duties imposed upon the new Conservancy Board are numerous; and I have considered them not exactly in detail, but what will be necessary for the purpose of executing such an Act as this. They have got to attend to the existing drainage, and to exclude all sewage matter now flowing. They have got to see that no new drains are opened allowing that sewage matter to flow; they have got to serve notices upon parties to oblige them to do works, and to see that the works are efficiently done, and if need be, to step in themselves and do it. All that will require a very large amount of supervision. Then next comes the question of superintending and preventing noxious matters going in (what is called scavenging), removal of manure heaps, and that the streams are not tainted, that the dead bodies of animals are removed from the streams.

2605. How are the penalties to be applied?—The penalties come under the old Act.

2606. Are they not to be applied in relief of the conservancy for expenses?—No; the penalties will be applied according to the existing law; I think they go to the conservancy.

2607. *Chairman.*] Do you mean the public penalties?—The public penalties.

Mr. *Hope Scott.*] To whom do the penalties go?

2608. *Chairman.*] They will go under Jarvis's Act, I suppose?—They will go under Jarvis's Act; they do not go to the Conservancy Board, they go to the county fund.

2609. Without a special clause they would go under Jarvis's Act?—We incorporate Jarvis's Act here, and make all our proceedings as to bye-laws and penalties enforceable under the general Act.

2610. Mr. *Hope Scott.*] Do you think that is reasonable, under the circumstances; do not you think that where it is for carrying on, practically speaking, a large operation of a social and civil kind, that those penalties ought to go to the fund?—If the Committee are prepared to alter the general clause.

2611. Mr. *Davison.*] I think it is right to say that we believe the penalties would be applied under the existing Act; Jarvis's Act applies to raising the penalties,

penalties, and not to the application of them?—We will just see what the old Act is; I thought it would go under Jarvis's Act.

2612. Mr. *Hope Scott.*] Then it would go to the fund?—No doubt.

2613. Then there is that to go on, at any rate?—Yes; it is the 7th of Geo. 3, if it is in force.

2614. *Chairman.*] As I read the 95th section, that is where the penalty under any Act is directed to be paid to you, you would have the means of recovering it under the 11th and 12th Vict. c. 42. But if there is no previous provision that the penalty is to be paid to you, then it would seem that the penalty must necessarily follow the course of the 11th and 12th Vict.?—I think it would be better to have a distinct clause if the Committee thought that the penalties ought to go to the fund.

2615. That is what is intended, as I read the clause; it is only where the money is already payable to the fund, that it would be in force under the 11th and 12th Vict., but if it is not payable to the fund, then it must follow the course of the 11th and 12th Vict.

2616. Mr. *Hope Scott.*] I suppose there is no difficulty in making that clear?—None whatever.

Chairman.] But at present it seems to go the other way, unless there is a clause to direct that all penalties should be paid to the fund.

Mr. *Pember.*] I am instructed we have never a farthing for penalties.

Chairman.] We do not know that you have been active in prosecuting anybody; the evidence is you have not.

2617. Mr. *Hope Scott.*] How shall we solve this?—If the Committee have no objection, I see no objection in principle myself; we very often do in public matters carry penalties into a fund; in the metropolitan district there is a law that all penalties shall go to the fund; this is in the metropolitan district, but, of course, this Act would override that.

Chairman.] It is rather a matter to be settled with the Government, if the Government have no objection.

Mr. *Pember.*] We should have no objection.

2618. Mr. *Hope Scott.*] I am informed that, under the Public Health Act, the penalties go to the expenses of the Board; that is in strict analogy to this. What do you think ought to come off the 1,500 *l.* a-year on account of the penalties?—A very small sum. You know in all these offences, the magistrates are very unwilling to convict in very large penalties; they generally impose a small fine, in the first instance. I have not much experience in that way, but as far as my experience goes, it is so.

2619. There can be little or no doubt, that as regards the New River Company, this Bill will do very little in the way of purifying their sources of supply?—I do not know. I regard it as of very great value indeed to both companies.

2620. As a matter of fact, Luton, which is the only considerable place above the New River intake, is exempted from the operation of the Bill?—Yes; but I happen to know a good deal about that district, and I know that the spread of population will be up towards that beautiful district about Hertford, and in time there will be a very considerable suburban population there, if things go on increasing as they are in the neighbourhood of these streams.

2621. Is Luton itself likely to be very much increased, do you think?—I do not know indeed; but there are various other fine districts up there, which are by no means unlikely to have population.

2622. By no means unlikely to have suburban and villa population?—Yes.

2623. That is not to be compared with the concentration of a town?—Still the drainage goes somewhere; it goes at present into the river.

2624. You know that the New River Company have the alternative of making new sewage works for Hertford, or paying them 600 *l.* a-year; and do you know that the East London Company have executed works of diversion at a very considerable cost?—Yes.

2625. And yet, under those circumstances, you seem to think that the water companies should bear the whole of the extra expense of supervision, less the penalties?—I do not see where the money is to come from, unless you tax the trade for the purpose.

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2626. Mr. *Pember.*] This clause here, got up by the promoters, does not touch us at all, but the alternative clause, as proposed by the water companies, touches us very nearly. I simply wish to ask whether the alternative clauses are before the Committee?——

Chairman.] Not yet.

Re-examined by Mr. *Davison.*

2627. You have been asked about the water companies paying the whole expense; that is the recommendation of the Royal Commissioners?—Yes, substantially so.

2628. Mr. *Hope Scott.*] The report says "that in the event of the funds derived from the navigation, together with the annual payments now made by the New River and East London Waterworks Companies proving insufficient to meet the expenses of measures taken by the conservators for the protection of the river from pollution, the said companies be called upon to contribute in equitable proportion, such further sum as may be necessary, not exceeding a maximum to be fixed by Parliament;" you will find that our clauses are strictly in accordance with that recommendation?—That is your contention.

2629. Mr. *Davison.*] That is the recommendation of Mr. Bates in his letter which appears in the printed report of the evidence; it states that the East London Water Company are prepared to face a large expenditure; just read that passage, will you?—The letter is dated 22nd of October, 1866; in page 3 of the Minutes of the Evidence of the River Pollution Commission, "the directors of the company are desirous to increase their protective powers in this respect, and are willing to face a considerable expenditure with that object, but they are advised that they may probably fail in obtaining the concession by Parliament of the necessary powers."

2630. Without going into detail, of course the engineer, whether or not he goes in a dog-cart, as my learned friend thinks it worth while to make the observation, must have something for going; engineers do not go in dog-carts for nothing?—I do not think you will get the supervision of a large district of that sort without some very considerable expense; you must have a man of experience for it, whose opinions would have weight.

2631. He must have offices, of course; or, at least, if the present premises are large enough, there must be some expenditure in preparing them, and so on?—Yes.

2632. There must be clerks to attend to the purification business of the trust?—Yes.

2633. And there must be inspectors?—Yes.

2634. And bailiffs, and, I presume, occasionally chemical analysis?—Yes.

2635. Then there is a revising barrister, is not there, who is to prepare the machinery of this new Board?—That ought to come out of the general fund; that is traders, and not purification.

2636. Then the conservators are to be paid their expenses?—I have not considered that they are to be paid all expenses.

2637. In your view, is 500 *l.* a-year an idle sum to offer?—I think it is wholly inadequate.

2638. And that by the New River Company who have made great profit; what is their capital worth now; what is a 100 *l.* share worth now in the New River Stock?—They have been commuted several times.

2639. They are worth thousands, are they not?—The original shares are worth thousands.

2640. The original shares are worth thousands, which thousands have been got out of the River Lee, and the springs?—Yes.

2641. And the East London Company who are willing to pay such large expenditure, are doing pretty well, are they not?—Pretty fair.

2642. They were entirely on the River Lee till last year?—Till last year.

2643. And now they offer us 500 *l.* a-year?—Yes.

2644. Mr. *Hope Scott.*] Are not both companies subject to a reduction of rates in favour of the public when they reach a certain maximum dividend?—Yes.

2645. Is not that reduction made for the benefit of the public?—Yes, when the maximum is reached.

2646. Mr.

2646. Mr. *Davison.*] What is the maximum, 10 per cent.?—The New River pays 6 per cent. now.

2647. No water company ever gets 10 per cent., does it?—No.

2648. Mr. Alderman *Lawrence.*] The Thames has been alluded to, and also the Lee. Did the Thames Conservators have any power over the tributaries beyond three miles?—They had not.

2649. Can you say about what the mileage of the tributary streams is which will have to be under the control of the conservators that will be added to this Bill?—You mean upon the Lee?

2650. Yes?—It is 500 square miles, I think. The area of the watershed is about 500 square miles; it is an enormous area, and the difference between the Thames and the Lee, in that respect, will be, that the Thames Navigation, within three miles, would be under constant supervision of their officers, but the Lee would have to be travelled over, and seen from spot to spot, in order to see the state in which they were.

2651. Might not this involve some expense of dredging in these streams?—No; I think barely that; they would not dredge, because the dredging is for the flow of water. The principal provisions of this Bill, which I have been looking to, are for the preservation of purity.

2652. Do I understand that this Bill will throw additional expense upon the new Board, different from what the old Board bears; first, an office for the meetings of the Board?—Yes, they have none at present; a portion of that ought to be paid by the companies.

2653. I am looking to the additional expense which will be thrown, as a whole, upon the new Board, which the present Board does not now bear; there will be an additional expense for an office?—Yes.

2654. And an additional expense for an engineer?—Yes.

2655. And an additional expense for clerks?—Yes.

2656. And for the solicitor?—Yes.

2657. And for the resident water bailiffs or bailiff, and inspectors?—Yes.

2658. And also the meetings of the Board, I presume, will be oftener?—They ought to be.

2659. The expenses of the conservators are thrown upon the new Board, which are not upon the present Board?—Yes.

2660. The expenses of the revising barrister will be thrown upon the new Board, which are not now borne by the present Board?—Yes.

2661. And all those expenses will be caused to the new Board by the change from one Board to the other, the main object of which is to purify the river to be used by the water companies?—Yes.

2662. *Chairman.*] Will you give us the schedule of your annual fixed charges for officers and their salaries?—At present?

2663. Yes?—Yes.

2664-5. Would it facilitate the settlement of this question, having regard to the clause that we have passed, that the Board of Conservancy is to be put in motion upon the demand of the water companies if any payment they agree to were suplemented by a provision that when the Board are set in motion the companies shall pay any extra expense to which you may be put in giving effect to their requisition?—To some extent it might be met in that way; but I think even then they would have to start with a much larger sum than 500 *l.* a year. I do not think that would be equal to the arrangement. There must be some supervision; you are imposing a new duty upon them; you say it shall be part of their duty to take care of the purity of the water,

2666. Is their proposal 500 *l.* a-year for both companies?—Yes; and my 1,500 *l.* a-year is for the two companies.

2667. As the clause stands, they are to set you in motion, and the expense is to be borne by the fund, as far as it will go?—Yes.

2668. As far as they have funds at their disposal?—As far as they have funds at their disposal. I do not quite understand.

2669. You understand the meaning of the phrase, as far as they have funds at their disposal for the purpose?—You mean their legal funds. The clause which authorises them to give further action makes no provision with reference to the payment; it only authorises them to call in action the Board of Trade; they order the Conservancy Board to put in action those powers.

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2670. Therefore if they were to pay the costs of their own requisition, they would then measure their own expenditure to some extent?—To some extent they would.

2671. Mr. *Alderman Lawrence.*] Under the present management of the present Board of Trustees, if there is a surplus income, the tolls are reduced for the benefit of the navigation, and they have been so reduced?—Yes.

2672. As contemplated by this Bill, any future surplus of income that arises is to be used for the joint purposes of the purity of the river and the navigation; the navigation in future will have no chance in the way of reduction of tolls?—At present as the Bill stands, you have not quite dealt with the whole of that question; yet we are only upon the preliminary question now as regards the amount of contribution. At present, the Bill stands in this way, as I understand Mr. Pember's clause, that the present income, in fact, shall be applied solely to the expenditure for present purposes, and be applicable to the redemption of the present mortgage debt.

2673. That being so, there would be no surplus?—There could be no surplus from that income for many years to come, seeing that the present mortgage debt is about 182,000 *l.*, and therefore, practically, you come back to this: that unless that clause is passed, unless you get a contribution from these water companies, you have no fund available.

2674. *Chairman.*] Then if they pay off the present debt and borrow a new debt, they can borrow that upon new conditions?—Yes; and then it becomes subject to the general purposes.

2675. Are you aware that, under the present powers, the new Board would be at liberty to borrow from the Public Loan Commissioners?—We have a clause somewhere that was for the Stort.

Chairman.] Have you power at present to borrow from the Exchequer Loan Commissioners?

Mr. *Pember.*] No.

Witness.] Whether or not there is a difficulty, they make loans upon new works, but they will not lend to discharge existing loans; I have often tried that.

2676. *Chairman.*] Have you made any application to the Treasury as to whether they are prepared to sanction a loan in this particular case?—No.

2677. Of course we can do nothing in this matter without the sanction of the Treasury, but I wanted to know whether the sanction of the Treasury had been asked?—No, I spoke to the Board of Trade; we have had difficulty in getting money from the Commissioners of the National Debt with reference to other matters; I see very little probability, looking to the very narrow limits here, that we shall be able to borrow from them; they require it to be a first charge as against all parties.

2678. Mr. *Benyon.*] Do not you consider that the 1,500 *l.* a-year is to be applied for the purification of the river?—Solely for that purpose.

2679. Is not that already the duty of the trustees; under their Act of the 7th Geo. 3, c. 51, there is a clause that if any person throws any dirt, rubbish, gravel, stones, and so on, into the river, he shall be liable for penalties?—That clause applies to impediment to the navigation; that is the usual clause introduced into all Navigation and Canal Bills, but it does not follow that that is to be a question of purity; I have already expressed what I consider to be the position in that respect. I have read through the Lee River Acts, and I can find no statutory obligation upon them to preserve the purity of the water, and if they had that obligation, it would only apply to the present navigation, it would not extend up the tributaries, which cause the great expense in this matter. The obligation upon them, no doubt is, that of keeping the river clear; they are entrusted with a certain river to keep it for the purposes of navigation, and they ought to see that it is not fouled; it is for the accommodation of the public. They can proceed to enforce the law as regards any towns, such as Tottenham, who do offend against it.

After discussion,

2680. Mr. *Benyon.*] I am going to quote the evidence of the Marquis of Salisbury,

Salisbury, at 4539. "Do you consider that as trustees you have a moral obligation placed upon you to preserve the water pure for the use of the metropolis?—We certainly should think so; we should think it very desirable to do so."—It is that moral obligation of which I spoke. C. H. Parkes, Esq. 28 May 1868.

2681. On the trustees?—On the trustees.

Mr. *John Marchant*, Examined by Mr. *Davison*.

2682. Can you tell the Committee whether practically you have been able to control the fouling of the river in the slightest degree?—We have not, under the powers of the Act: we have been obliged to take the general power which every individual has; we have no special power under our present Act of Parliament which enables us to exclude sewage from the river. Mr. J. Marchant.

2683. Clause 109 gives you this power: "That if any person or persons shall wilfully throw any ballast, gravel, stones, rubbish, or dirt, into any part of the said river, or cuts, or canals used or intended to be used for navigation, with intent to prejudice the same, every person so offending, and being convicted thereof before any justice of the peace for either of the said counties of Hertford, Essex, or Middlesex, upon the oath of one or more witness or witnesses, shall by warrant of the said justice be sent to the House of Correction, there to be kept to hard labour for such time as such justice of the peace shall direct, not exceeding three months." That relates to navigation?—That relates to the question of obstruction, and has nothing whatever to do with purity.

2684. It must be something, of course, in the nature of rubbish or ballast or the matters mentioned there?—Yes.

2685. Does that give you any power over the sewage?—None whatever; I may, perhaps, be permitted to say that practically it is totally inoperative; we cannot prove the intent of a person to prejudice the river by making a shoal in it.

2686. Have any persons ever gone to prison?—No.

2687. Have you ever tried to send anyone?—Not in my experience.

2688. As a matter of fact, I believe, you served some notices?—Yes.

2689. That was at the suggestion of the late Marquis of Salisbury?—Yes.

2690. With a desire to do something if you could?—Yes.

2691. You sowed the notices broadcast?—Yes; I went down the river myself two or three times, and took a list of all the drains and outfalls of sewage.

2692. Did that do any good?—No; I served everybody with a notice, and nobody took the least notice of it, except, I believe, that I was chaffed a good deal about it.

2693. Now the gross sums that have been paid to the officers of the river Lee trust is, how much?—In half-an-hour I could get it out for the last five years; I was doing that when I was called.

2694. *Chairman.*] I only want to know what your present establishment is?—That I can give you in a return, if you please.

2695. Mr. *Davison.*] Take a sheet of paper and put it down as nearly as possible; if it is inaccurate we can alter it?—Shall I give 1867?

2696. 1862 will do?—Salaries of engineer and collector, taken together, 1,343 *l.* 15 *s.*

2697. What is the clerk's salary?—Clerk and solicitor, 600 *l.*

2698. Are you the clerk and solicitor?—Yes.

2699. Are you paid by salary in lieu of fees, or are you only paid in costs?—Costs out of pocket, counsel's fees, and so on; all costs out of pocket; the 600 *l.* includes the prosecution of all legal matters; engineer 450 *l.*, chief collector 293 *l.* 15 *s.*

Mr. *Hope Scott.*] Collector? surely the collector can have nothing to do with this question?

Chairman.] We are only seeing what the fixed establishment of the Board is.

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2700. Mr. *Hope Scott.*] I thought you meant with reference to particular actions, such as are likely to be taken here: the collector is the collector of tolls?—Yes, the collector of tolls; he is the traffic manager, in fact.

2701. *Chairman.*] Where does he live?—He lives at Enfield Lock, there is an establishment there.

2702. An office?—Yes.

2703. Is that the head office of the trustees?—The head office of the trustees is at Hertford, but the traffic manager's office, and all matters connected with the collection of the tolls, is at Enfield.

2704. Is your office the head office?—Yes.

2705. Which is included in the 600 *l.* a-year?—No.

2706. Do they allow you rent?—Yes.

2707. How much?—£. 67. 10 *s.* a-year.

2708. Mr. *Davison.*] Before we leave that figure, Mr. Beardmore used to have 450 *l.* a-year at ordinary times?—I am speaking now of ordinary expenditure.

2709. When you had certain extraordinary works going on, the reconstruction of Hertford Lock was one of them; at that time he had 900 *l.*?—He had, during the progress of those extraordinary works, 900 *l.*

2710. What else have you?—Pensions must be put down as annual office expenses.

2711. Mr. *Hope Scott.*] What is the collector?—The collector is 293 *l.* 15 *s.*

2712. Is that poundage?—No; pensions, 429 *l.* 2*s.*

2713. *Chairman.*] Will you explain that?—Pensions to old servants.

2714. To whom?—A pension to the late clerk, who was 40 years clerk under the navigation: he has 300 *l.*, and the rest is made up of pensions to lock-keepers and collectors who have retired; the lock-keepers' and collectors' wages were 1,356 *l.* 17 *s.*

Mr. *Davison.*] The Committee only want the salaries.

Chairman.] Yes; what is the real establishment; not expended upon works?

2715. Mr. *Davison.*] Then rates, rents, and taxes?—The lock-keepers and collectors I have given.

2716. *Chairman.*] Is that all the establishment?—Yes, that will be all the establishment; then we get to certain annual payments, such as rates, rents and taxes.

2717. Mr. *Davison.*] The establishment would require offices?—Yes.

Mr. *Benyon.*] The figures you have given us, instead of amounting to 1,353 *l.*, amount to 1,832 *l.*

Mr. *Davison.*] Have you got 900 *l.* a-year for the engineer, Sir?

2718. Mr. *Benyon.*] I have got 450 *l.* for the engineer, and 600 *l.* for the clerk; for the rent of office 60 *l.*; 293 *l.* 15 *s.* for the collector of tolls, and 429 *l.* for pensions, making a total of 1,832 *l.*?—£. 1,356. is an additional sum paid to lock-keepers and collectors.

2719. Mr. *Davison.*] If you look at 146 of the evidence, you will see that, except that they have not got the salaries split up, there you see salaries 1,353 *l.*, that includes an extraordinary 450 *l.*; then you have pensions of lock-keepers and collectors 1,352 *l.*; rent, rates, and taxes 639 *l.*?—Yes; if you are taking the year 1866. In the year 1867 they were 784 *l.* 10 *s.* 3 *d.*

2720. Then there are law expenses, and Parliamentary expenses?—Those we look upon as extraordinary; we put those into the extraordinary expenses.

2721. But they do sometimes occur?—Very largely.

2722. You have engineers' expenses, in addition to that salary, that is extraordinary?—Yes; then we have insurance office disbursements, and sundries.

2723. What does that make as the total?—The total office disbursements, 302 *l.* 4 *s.* 3 *d.*

2724. Mr. Alderman *Lawrence.*] Are there not the expenses of dredging, or dredgers?—That comes into works.

2725. But

2725. But the dredgers are constantly occupied in keeping the river clear?—That we get under labour.

2726. Mr. *Hope Scott.*] Is that under the lock-keepers?—No; I have not given those figures of dredging; printing, stationery, and advertising, 103 *l.* 2 *s.* 11 *d.*

2727. Mr. *Powell.*] What is the total; I want the sum of all the figures you have given us?—I have not the total figure of what I have given you, because I have made it out in a different way.

2728. Mr. *Davison.*] What are the law expenses for the year 1867?—I think the law expenses came under extraordinary.

2729. What are the ordinary printing and stationery charges?—The ordinary printing and stationary charges are 103 *l.* 2 *s.* 11 *d.* I think it is all set out in the evidence; if you deduct the first item on page 146, the interest deducted from the total amount of ordinary expenditure gives you the exact amount.

2730. *Chairman.*] We have that quite clear now?—It strikes me that land rents should go in; they are ordinary annual payments coming year after year, and they are very large.

2731. They would not go into your establishment. We have got the account of the land rents in the returns you have given; rental 480 *l.*, that includes the water rental as well as the land rental?—I mean the payment. There are certain annual fixed rents which are paid.

2732. There are certain fixed annual land rents received?—No, there are no land rents received.

2733. You have put them down?—Mill rents, that includes the water.

2734. Land and other rents, 787 *l.*?—That includes mill payments and water rents.

2735. I only want from you the details of the items you have of the 3,129 *l.* 14 *s.*; you have given as those details, and I do not want anything more.

Cross-examined by Mr. *Hope Scott.*

2736. You say that you served notices all down the river, and up the river, and were chaffed?—Just so.

2737. Were those services of notices, including the endurance of chaff, paid for by your 600 *l.* a year?—Certainly they were.

2738. So that you considered it to be within your present duty, at 600 *l.* a-year, to serve notices up and down the river, even though it ended in nothing but chaff?—If we had proceeded to legal extremities, of course there would have been further expenses.

2739. Further expenses out of pocket?—Draft of that notice and service by post was not a matter to be included in my salary; that I should be paid for extra.

2740. And if you had to carry on a lawsuit, would that have been included in your salary, except the money out of pocket?—Yes.

2741. You have carried on some lawsuits, have not you, with the trustees?—Yes.

2742. How many upon the subject of the purity or discharge of noxious matter?—We have carried on Chancery suits; one against the Metropolitan Board, and another against the Tottenham Local Board, and then we had another, but that had nothing to do with the purity.

2743. The suit against the Metropolitan Board had to do with purity?—Yes.

2744. And the suit against the Tottenham had to do with purity?—Yes.

2745. Were there any others relating to purity?—We had one or two summonses before magistrates.

2746. Relating to purity?—Yes; but our point was obstruction; we said that the introduction of the sewage was an obstruction.

2747. That is your construction; but we will come to that?—When you say "purity" alone, I say no.

2748. Relating to the discharge of noxious matter into the Lee?—Yes.

2749. You have mentioned your injunction which you obtained against the Metropolitan Board of Works, and the injunction which you obtained against the Tottenham, and several other matters before the magistrates; did not you pay for putting into force the Thames Conservancy powers as regards matters within

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within three miles of the Thames?—We got up evidence for the Thames Conservancy by our own officers.

2750. They undertook all the other costs of the prosecution?—Yes, they attended, and secured their own convictions, as I have said.

2751. What did those various Chancery proceedings cost you up to the period at which you got costs allowed you; how much did the Tottenham proceedings cost?—The costs in that matter are not sent in yet; the appeal was only dismissed about a fortnight ago; the Tottenham appeal.

2752. Cannot you give an idea as to what your costs were at the time of the appeal being dismissed?—I cannot.

2753. A considerable sum?—Yes.

2754. What have you got from them?—We have got, I think, some 500 *l.*, but I am speaking without book.

2755. What did you recover from the Metropolitan Board of Works?—Nothing in the way of costs.

2756. What were your costs there?—Taxed costs.

2757. What does that amount to?—That was happening before my appointment, and therefore I would rather that sombody else spoke about it.

2758. However, the usual amenities, I suppose, of a Chancery suit?—Yes, certainly.

2759. Which would have fallen upon the trustees if they had been unsuccessful, but which fell upon the other parties, the trustees being unsuccessful?—You will not allow me to introduce anything with reference to obstruction; but it was obstruction chiefly that we proceeded against them for, and I can prove that by the fact that the court ordered them to pay 800 *l.*, to enable us to dredge what they had cast in.

2760. You are going even still faster than I wish; you say you had 800 *l.* awarded to you for dredging away the filth that had come in from the metropolitan sewer?—Yes.

2761. Was that filth in a liquid form?—It was both in a liquid and a solid form.

2762. I suppose most of the sewage deposited is partly liquid and partly solid?—Yes.

2763. That was the ordinary discharge of sewage from an overflow from the works of the Metropolitan Board?—It was very extraordinary.

2764. But containing ordinary matter?—Yes, it was filth.

2765. Does Tottenham send nothing but solids into the River Lee?—Certainly, they send liquids.

2766. Did the court give you an injunction only as regards solids, and leave them to discharge the liquids?—No, they gave us a general injunction.

2767. Against both solids and liquids?—Yes, a general injunction against both solids and liquids.

2768. Now let me recall your view of the old Act, given under more pacific circumstances than this evidence; it is at page 139, taken before the River Commissioners?—At what number?

2769. We will begin at 4384. "Have the trustees of the Lee been at all troubled by pollutions caused in the course of the navigation?—Yes. Have they ample legal powers to deal with parties who cause nuisances?—They have no legal powers other than the common law rights which individuals possess in such cases; they have no statutory powers to deal with nuisances. There is one section in our Act which enables them to inflict penalties upon parties who maliciously cast refuse into the river, building refuse, and so on. The words are 'if any person shall wilfully throw any gravel, ballast, stones, rubbish, or dirt (*reading from the Act to the words in parenthesis*), not exceeding three months'. What clause do you refer to?—The 109th clause of the 7th George 3rd, chapter 51. Would the word 'intent' in that clause so qualify the intent and meaning of that clause, as to render it inoperative?—Perfectly so; I consider that the word 'intent' entirely prevents the clause being operative. If you were to summon a man, would you not have great difficulty in proving what he 'intended' to do?—It would be utterly impossible to prove it. That clause requires amendment, does it not?—Yes, I have never heard of an attempt yet being made to put it in force." Now comes the question, and now we shall have Mr. Marchant's view of the construction of this clause in the next answer. "So far

far as the clause goes, would not the word 'dirt' include sewage?—Yes, I think it might; but then it must be proved that there was a wilful intention on the part of the offender to obstruct and injure the navigation"?—Yes.

2770. Now, was it not part of the object of the trustees, in giving notice for a Bill of their own, to obtain an additional power to prevent the discharge of sewage into the Lee?—The trustees felt that the time had come when somebody must take upon themselves the question of purity.

2771. That body was to be the River Lee Trustees?—Yes; but funds must have been provided by other persons.

2772. We will come to the funds presently. At 4393 I see you are asked, "Might I ask you whether the trustees have discussed recently the advisbility of obtaining additional legal powers, similar to those which are embodied in the Conservancy Act of last Session for the River Thames?—They have in reference to that and many other objects, and it is thought desirable to obtain powers for the same purpose. The Thames Conservancy since the passing of their Act of 1864, have taken proceedings in six cases, in which they have obtained convictions under the three mile clause." Then I think you say, under No. 4400, "One or two of these cases we took before the police magistrate ourselves, and in the case of Tottenham we failed, because we had not the power which the Thames Conservancy enjoy. Now, the Commissioners report that large sums of money are spent in dredging out sewage mud, which has accumulated in the bed of the river." Then it goes on to say, "The river at Old Ford is rendered very pestiferous during hot weather, from the discharge of impurities from large chemical and other works on the banks. The Limehouse Cut in summer is also very foul. The district immediately bordering the tidal portion of the Lee, has become a nuisance district, the seat of trades expelled beyond the limits of the better parts of the metropolis." Are not those places, specially mentioned by the Commissioners, below the intake of the water companies?—Yes; would you just let me see the enumeration, I have not caught the enumeration?

2773. The third paragraph in page 13?—(*Witness perused the same*). You are reading from the Commissioners' own report.

2774. At page 13 of the River Commissioners report? Yes, the third paragraph begins "Pollution from sewage."—Yes, Old Ford is below the intake.

2775. *Chairman.*] Tottenham is below the intake?—Yes.

2776. Tottenham is below the intake of the water companies?—Yes.

2777. Your law proceedings with the Metropolitan Board of Works related to places below the intake of the water companies?—Yes.

2778. Mr. *Hope Scott.*] It is a fact that accumulations of this sewage mud are greater, are they not, below the intake of the water companies than above?—Yes.

2779. What interest have the water companies in maintaining the purity of the river below their intake?—I presume that the Act of Parliament must have reference to the whole watershed of the Lee, whether above or below the intake; it would not do to simply purify the river above the intake.

2780. *Chairman.*] The question is, what interest the water companies have, particularly below the intake?—I take it that whatever body is to undertake the purification of the river, must expend the money in purifying the lower portion.

2781. That is not the question. The question is, whether they have any particular interest in it below the intake. I suppose they have none, unless it be something that is not before the Committee?—No, I presume not.

2782. Mr. *Hope Scott.*] Let us go a little further on. Can you give us how much is attributable to dredging under the figures which appear in your accounts, amounting to 1,500 *l.*, or something of that kind?—What sums are you taking?

2783. You have got, dredging &c., several items together. If you look into your account, you will see, maintenance of locks and weirs, dredging, and so on, 1,501 *l.* I see you say in your evidence, you have spent large sums in dredging?—Yes, dredging; not the sewage simply.

2784. I beg your pardon. "We have in consequence to spend large sums of money in dredging out the sewage mud which accumulates in the river." That is page 140, No. 4402; and then, if you supplement that with 4413, you will see that the Ware sewage has attributed to it some special works: "Is any bank formed in the navigation below the point where the Ware sewage is discharged?

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—Yes, I believe there is one accumulated, and we shall have to incur expense in clearing it away. Is that an obstruction to the navigation?—It will become such."—Will you go on, please, because there are some qualifying expressions.

2785. "Cannot you, under your Act, proceed against the authorities of Ware on that account?—At that point there is a stream which enters the river, and it flows very rapidly there from the town mill of Ware, and the rapidity with which the water comes down clears away the bank or the accumulations which are continually growing there; and then there must be large accumulations in the river, but they are distributed over a large area." Can you tell me what sum you spend annually in dredging?—We spend annually in dredging, but not sewage, (I am speaking now of dredging only) about 1,000 *l.* a year.

2786. Is the superintendence of that dredging by your engineer met by his ordinary salary?—Yes.

2787. *Chairman.*] What is it that they dredge out of the river?—The floods bring down accumulations; the inflowing tide throws a great deal, and dredging is going on continually in Limehouse Cut, and other portions of the river, when the tide flows up; every tide brings in a large accumulation of solid matter, deposited from time to time; and we have frequently applications from barge-owners to say that their barges, when loaded heavily, have touched at such and such a point, and that has to be cleared away at great expense.

2788. Mr. *Powell.*] What is it the floods bring down?—They bring down all kinds of solids.

2789. What kinds of solids?—I am speaking of storm floods.

2789*. You mean from the surface of agricultural land?—Yes; and the banks occasionally give way.

2790. Mr. *Hope Scott.*] It appears that the trustees have applied their funds partly in dredging away impediments caused by the sewage, and partly in carrying on law-suits with parties who have discharged sewage, both liquid and solid, into the river, and it seems to have been your opinion, as lately as 1866, that the Act did include sewage, but the proof of intent was necessarily to render the Act operative?—So far as the introduction of sewage has interfered at all with the navigation by silting up, or anything of that kind, we have thought it our duty at once to put a stop to that.

2791. Then I think whenever you make any contract for barges coming along and discharging their loads at the wharves, you insert a clause that they shall discharge no sewage; that is at page 142, No. 4465: "In every case when we enter into an agreement of that kind we invariably insert clauses to restrain parties from casting any pollution into the river; we make that a *sine qua non*, and we will not grant them the facilities they require unless they undertake to exclude all sewage and drainage from the navigation"?—Yes; that is so.

2792. Now, I think at page 145, you give in your report, which I need not trouble you by reading, an account of the injury done by the sewage to the river?—Yes.

2793. I do not suppose you differ now from what you said then upon that subject?—No; "the navigation is also injuriously interfered with by the deposit of mud along its bed." I see that is part of it.

2794. Do you remember Mr. Beardmore saying, at page 26 of the evidence, "A great deal of dredging is required in the lower parts of the valley, where the sewer comes in, and that is gradually increasing, and more dredging is required"?—Yes, I see that.

2795. That is so; now then, Question 753 refers to this; I am told it is the same page?—All this interferes with the navigation; that is why we have taken it up.

2796. "We cut the weeds, and we dredge on a regular system; the officers employed on the River Lee are required to get out and bury any carcases." Do those carcases interfere with the progress of the barges?—No; but surely the lives of navigators are to some extent in our hands.

2797. The navigators' health is to be attended to. I think my Lord Salisbury mentioned a case in which a navigator had died of the cholera, in consequence of the state of the Lee?—He may have done so; but I do not recollect it.

2798. It is at page 149, No. 4536; but I will first finish with this passage: "The

"The officers employed on the River Lee are required to get out and bury any carcases." That is under their ordinary salary, I suppose?—Yes.

2799. "But these are very rarely seen above Tottenham. Latterly, in the Limehouse Cut, and all the way up the river towards Tottenham, there are, in hot weather, a considerable number of dead dogs and other things; but we have systematically had them collected and buried, and so got rid of." So that you seem to have been scavengering. I suppose your officers are retained upon the terms that the collection of dead dogs shall be, amongst other things, a part of their duties. Now I will go to the passage I referred to, by my Lord Salisbury, at 4536?—I think we should have been very reprehensible if we had not removed those dead dogs floating down; we should have been subject to legal proceedings if we had not.

2800. My view of your duties is very like your own, if you have performed them. If you had had such clauses in your original Act, as are proposed in this Bill, you would have worked them efficiently?—If we had had funds enough; it is only a question of funds.

Mr. *Davison.*] It is only a question of what you ought to pay for it.

2801. Mr. *Hope Scott.*] I do not think we ought to pay much. "Do you think that it would be advisable that some additional power should be provided to prevent this state of pollution which is growing up?—I think it very desirable indeed. The cases are rather frightful cases; there is, I think, one case of a man going up to Limehouse Cut, and dying of cholera within 48 hours; he was a bargeman from this part of the country; but there is an universal complaint of it." Then follows what the Honourable Member called attention to, with regard to the obligation towards the water companies. Now I will go to the question of whether you are rich enough, and for that purpose we will go back to your evidence at page 138?—Yes.

2802. We will begin at 4367. In the first place, your borrowing powers are not exhausted, I think?—They are not.

2803. By the sum of 55,730 *l.*?—No.

2804. "Are you bound by the terms of the Act to repay that money," that is, the borrowed money, "or may it remain a permanent debt?—We are not bound to repay it. You are not bound when money is borrowed by the trust for water supply and other purposes, by Act of Parliament, to repay it either in 30 or 50 years?—There is no limit in this case. It is borrowed upon the security of the tolls?—Yes, and other property of the trust."—Perhaps I had better mention that I do not quite see what you are driving at.

2805. It is not necessary that you should; you would be a much more straightforward witness if you did not think of the effect of your answers?—I say that we are bound to repay it if the parties require it.

2806. So is every debtor according to the terms of his bonds; but you are not under a Parliamentary obligation to make a sinking fund to pay off that debt. You are asked at 4370, "In the event of railway competition or any other form of competition, or any alteration in trade diverting traffic from the river and reducing the income of the trust, is there any outside security to the lenders of the money?—We possess land and mills, and annuities secured by Act of Parliament from the water companies. You have an income from the water companies?—Yes. I believe the amount was mentioned by your engineer?—Yes, 3,500 *l.* I might mention, just to qualify your observation." That is evidently an observation about railways; "that in 15 years from tolls alone we have doubled our income; during the period of railway competition we have annuities secured by the Act, and we have mill property and land, and a valuation of that has been made within a recent period, and it is a very large sum indeed that is over and above the tolls. You have a profitable trade now, and one that has for many years back been growing?—Yes; this year we shall realise 1,000 *l.* upon the river more than at any other period. I may ask you, perhaps, whether your traffic manager will attend to give evidence?—He will. He will, perhaps, put in the tonnage carried upon the Lee, showing the rate of increase, and also the income derived from that tonnage?—Yes, he will. Have the trustees power to increase the rate of charge over and above what is at present paid, supposing that they resolve to do so, to meet their engagements?—Yes; they can considerably increase it." Now I do not want to weary the Committee nor myself, but I will go to your sanguine view, which I hope

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I hope you have had nothing to damp since then, upon page 139; a question by the Chairman at 4379: "You are able now to offer good security for any money you may wish to borrow to improve your works?—We think so, and with a very considerable margin. In the event of your continuing to earn a surplus, would the trustees be authorised to pay off any of the mortgaged bonds, or would they, instead of that, reduce the rate of tolls?—They have power to do either; they have power legally to pay off the bonds, because some of the debentures are overpaid; some parties prefer the security, and they allow them to remain. The trustees would probably consider whether it was desirable to pay off some of their debt, or to lower the tolls for the public; as long as the trade remained in an increasing condition I presume they would pay off the mortgages in preference to lowering the tolls; in the event of the day coming when the trade of the district was found to be so profitable that they could wipe off their mortgage debt altogether, and have the whole income available except for the payment of the salaries of their officers, does the Act point out any arrangement that might be made?—The navigation would become a free one absolutely. The tolls would then be reduced to a minimum, to provide for the payment of the salaries, and so forth?—Yes, there must be some revenue for that purpose, for maintenance and repairs, but that might be met probably by the payments made by the water companies, or by rentals." Well now, you seem to contemplate the arrival of a period when the navigation will be absolutely free?—No, pardon me, it was the Chairman who suggested that state of circumstances; it was quite a hypothetical case.

2807. You adopted it, and worked it out, upon the supposition that the navigation should become absolutely free, whether the water companies continue their contribution or not?—"Absolutely free" must, of course, be qualified by 4382.

2808. But your tolls are received *de anno in annum*?—Yes.

2809. And your tolls are very much within your power of charge; you have property which is valued at a very high figure, according to the evidence of Mr. Glasse, is it not?—Yes; I should add that last year the deficit upon the revenue was 600 *l.*, that is to say, that our expenditure exceeded our revenue by that amount.

2810. On extraordinary works?—No, on ordinary works.

2811. Does that appear in your account?—Yes, if you take that, which is the fairer way of averaging it, for the last 10 years, you will find the surplus is about 300 *l.* a year, which is all we have at our command, to pay this debt of 180,000 *l.*

2812. That is your margin upon your present tolls?—Our margin upon our present income, including everything.

2813. But, of course, with the power to raise your tolls?—Yes.

2814. That includes all your dredging operations, and all your law operations?—Yes; but raising our tolls would be a dangerous expedient.

2815. That includes all your dredging operations, and all your local expenses connected with the purity of the water?—Connected with the navigation.

2816. Can you tell me whether that is a correct statement of your tolls (*handing a document to the Witness.*)?—This is not a statement of tolls.

2817. I mean receipts?—I cannot tell; I have never seen it till this moment. This is something prepared by the water companies, and I have not seen it.

Re-examined by Mr. *Davison.*

2818. My friend has said a good deal about your tolls and your power to raise them; if you did raise them, what would become of the trade?—In all probability the trade would be diminished; so that our revenue would be materially decreased.

2819. It is only by charging your present tolls that you are enabled to keep your revenue at what it is at present?—We have very sharp competition from the Great Eastern Railway, which runs parallel with us.

2820. There are other railways in that district?—Yes.

2821. So that everything in your water navigation depends on your charging tolls acceptable to the trader?—Yes.

2822. Your

2822. Your margin upon these tolls is 300 *l.* a-year?—Yes; I have taken the tolls for the last 10 years to see.

2823. Now, with reference to your proceedings, you have proceeded against Tottenham and against the Metropolitan Board of Works, by way of injunction, have you not?—Yes.

2824. Not under your Act of Parliament?—No.

2825. But by way of doing that which you say in your evidence every person has a common law right to do?—Quite so.

2826. Of course that would be done as against any one upon the River Lee? No doubt.

2827. And any one upon the River Thames?—No doubt.

2828. Therefore there was no necessity for the Thames Conservancy or for this Committee or anything of the sort, if that would do?—That is quite true.

2829. These are proceedings which you have taken, and in which you have succeeded?—Yes.

2830. Anybody could do it anywhere, and there would be no want of Water Commission, or any Committee at all?—Certainly.

2831. But what you have not done is this: you have not been able to proceed under your Act of Parliament, Clause 109?—We have not.

2832. Now, about the interest of these companies; do not the East London Company themselves throw a great quantity of sewage out of these intercepting drains into the river?—A quantity of sewage is discharged into the river from the intercepting drains constructed by and belonging to the East London Waterworks.

2833. Did not that cause a nuisance during the cholera year, or rather was there not a nuisance about there during that year; I will not say what it was caused by?—Certainly.

2834. And it was caused, was it not, near to where the reservoirs of the East London Company are, though it is below their intake?—Yes.

2835. Captain Tyler's Report will tell us that?—Yes.

2836. Now, in addition to that, have they not been instrumental in taking away a large quantity of water, which, if it had not been taken, would have helped to take away this noxious matter?—Certainly.

2837. And for that they have been made to pay?—Yes.

2838. Now you have given your evidence about what the cost of carrying on the Lee Trust now is?—Yes,

2839. You are, I suppose, a salaried officer during pleasure?—Yes.

2840. And there are others like you?—Yes.

2841. And I presume if they had other things to do they would expect additional pay?—Unquestionably.

2842. What do you say to 500 *l.* a-year?—I say it is perfectly preposterous; if it is intended to cover the whole expense of the working of this Act, I think it is nonsense.

2843. Mr. *Lawrence.*] I wish to ask this one question; you have been asked with respect to the interests which the water companies have in the purity of the river below the intake?—Yes.

2844. I will ask you, as you have been cognizant of the whole of the proceedings connected with this matter, whether you consider it would be possible to carry out the additional duties imposed by this Act upon the water companies above their intake; that is to say, in the watershed above the intake, without additional expense; or whether you think that the additional expense thrown upon the Conservancy Board for that portion, independently of the lower part, would amount to a less sum than 1,500 *l.* a-year?—I am sure it could not. I am within bounds when I say that there are 300 square miles of watershed to conserve, not included within the jurisdiction of the present trustees.

2845. There is another question I wish to ask you; you have been asked as to the sewage of the river; for the purposes of navigation may not the River Lee almost be called an artificial cut, or a canal, for the greater part of it?—Yes, three parts of it.

2846. Supposing this Act is carried out, do you apprehend that you will thereby get rid of the necessity of dredging the river?—Certainly not; the dredging must go on for the reasons I have mentioned in my evidence.

2847. You are acquainted, I dare say, with canal navigation; is it not necessary in canals, where sewage does not fall into them, at times to clear them out

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out from matters which get into the canal?—Certainly; it is incumbent upon the navigation trustees to keep a staff for that purpose.

2848. Therefore if this Act is carried out in its integrity, you will be under the expense of that, in addition to the present arrangements of keeping it clear for the purposes of navigation?—Certainly.

2849. *Chairman.*] Do other parties take water from the river to drink besides the New River Company?—Yes, Hertford takes some.

2850. Mr. *Benyon.*] Two hundred thousand gallons a day is taken by the town of Hertford alone, is it not?—One hundred thousand.

2851. But they have the power to take 200,000?—No, 100,000.

2852. Does not Ware also take water from it?—No.

2853. It has the power of drinking the water?—I suppose the riparian owners would have the right.

2854. Have not the riparian owners the right to take water from the Lee for domestic use; has not that been reserved to them?—No, I think not.

2855. Not under the River Lee Act of 1855?—It may be so; and if you have the clause before you and will call my attention to it, I will acknowledge it at once.

Chairman.] The rights of parties to use the river are reserved.

2856. Mr. *Benyon.*] And yet you think that the water companies ought to pay for the purity of the river?—I consider that those who benefit by the purity ought to pay for it.

2857. Then ought not Hertford to pay, and ought not the riparian owners to pay?—Hertford has now got some of the purest water you could require, and it does not require any other purification.

2858. Does not the New River Company take its water from the same place, and pay for it, while the Hertford people pay nothing?—The New River Company are seeking to obtain powers over the Board of Conservancy, whose jurisdiction extends from Limehouse up to Luton, but simply for the advantage of their own company.

2859. Mr. *Hope Scott.*] There is a representative of Hertford on that Board?—There are electors; but Hertford only takes the water the same as any other riparian owner would take it, namely, for the purposes of consumption in the town, and not for the sale of water to produce a dividend; that makes a vast difference.

2860. Mr. *Benyon.*] They take it for the purpose of their own domestic use? Yes.

2861. Mr. *Hope Scott.*] Section 73 of the Act of 1855 gives them a right to 100,000 gallons, and such further quantity beyond 100,000 gallons as shall be necessary to make up a supply of 25 gallons per head daily of the population?—Yes; Hertford always had a prescribed right to take it; the New River Company came subsequently.

2862. Mr. *Surtees.*] Is it the case that Hertford is supplied by a well with a large quantity of water?—Yes, chiefly, now; the old works, I believe, are maintained in case there is any failure in the new works. There are new works which derive their supply solely from the well, and those works are supplying the town now.

2863. Do you know what those works cost?—About 4,000*l.*

2864. And the water is pumped up to the top of Port Hill?—Yes; a reservoir was constructed on the top of Port Hill. The water falls by gravitation into the town.

The remaining clauses of the Bill were discussed and agreed to, amendments being made therein.

The *Chairman* was directed to Report the Bill, as amended, to the House.

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TO THE

REPORT

FROM THE

SELECT COMMITTEE

ON THE

LEE RIVER CONSERVANCY BILL.

Ordered, by The House of Commons, *to be Printed,*
29 *May* 1868.

I N D E X.

[*N.B.*—In this Index the *Figures* following the Names of the Witnesses refer to the Questions in the Evidence; those following *Ev.* to the pages in the Evidence; and the *Numerals* following *Rep.* to the Pages of the Report.]

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Bow Lock. Construction by witness of a lock at Bow Creek, in addition to the erection of new tidal gates, *Beardmore* 1512. 1577-1580——Dispute with the barge owners when the lock was finished upon the question of their going through toll free; explanation hereon as to a voluntary payment of 2*s.* or 2*s.* 6*d.* having been agreed to, it being still open to the barges to go through the tidal gates toll free, as before, *ib.* 1512, 1513. 1517, 1518. 1530-1561. 1574-1595——Clause in the Act of 1850 relative to the navigation being free between Bow Creek and Old Ford Lock; statement hereon that the tidal gates are still open, though a charge is made for the use of the lock by any barge electing to pass through it, *ib.* 1530 *et seq.*

Complaint as to the tolls levied by the trustees at Bow Lock, witness preferring to be limited to the use of the tidal gates, and to pay nothing; advantage at times from the lock, whilst at other times it is a great disadvantage, *Brown* 1603 *et seq.*——Witness concurs in the complaint of the charge levied by the trustees upon barges passing through Bow Lock, and submits that the navigation at this point should be free, as it was before the construction of the lock, *Meeson* 1655 *et seq.*

Decision by the Committee that the clause proposing a toll of 2*s.* 6*d.* for a barge or other craft passing through Bow locks or tide-gates be struck out, *Ev.* 119.

Brick Manufacture. Importance of the navigation as regards the manufacture of bricks between Ware and Hertford, *Marchant* 496, 497.

Brown, Henry. (Analysis of his Evidence.)—Lighterman and bargeowner: has known the works on the Lea for many years, 1596-1598. 1630-1634. 1644-1646——Statement to the effect that the lower part of the river was, on the whole, in as good a state for navigation before the Act of 1850, as since the construction of the locks by Mr. Beardmore, 1598 *et seq.*——Complaint as to the toll levied by the trustees at Bow Lock, witness preferring to be limited to the use of the tidal gates, and to pay nothing; advantage at times from the lock, whilst at other times it is a great disadvantage, 1603 *et seq.*

Broxbourne. Accession of some very bad sewage at Broxbourne, *Tyler* 243.

C.

Cheshunt. Great want of a proper system of drainage at Cheshunt, there being cesspools there which are never emptied, *Tyler* 244-247——Proposed compulsory exclusion of all sewage from the river in respect of Cheshunt or West Ham, though not towns of large population, *Rawlinson* 1027, 1028.

Chuck, Joseph. (Analysis of his Evidence.)—Resides at Ware, and has a summer-house overhanging the Lea, about 300 yards below the outlet of the Hertford sewage, 2136–2144——Testifies to the great fouling of the river by the Hertford sewage, as discharged from the Mainfold Ditch: exceedingly foul state also of the Mainfold Ditch itself, 2141 *et seq.*——Very small portion of the sewage of Ware which enters the river above witness's house, the nuisance arising almost exclusively from the Hertford sewage, 2144–2149. 2161–2166. 2171–2173.

Cobham, Nathaniel. (Analysis of his Evidence.)—Solicitor at Ware: is clerk to the local board of health, 2261, 2262——Constant nuisance to the town of Ware from the manner in which the sewage of Hertford is dealt with, and is discharged into the river through the Mainfold Ditch; great increase in the nuisance of late, 2263, 2264. 2274, 2275. 2277, 2278. 2292–2311——Power of the New River Company under the Act 15 & 16 Vict. c. 39, to take the Hertford sewage to a point two miles below the present outlet; purchase of some land for the purpose, though the plan was not carried out, 2265–2273.

Case submitted by the Ware local board to counsel (Mr. Lush) in 1865, and opinion thereupon, to the effect that the New River Company should be indicted if the nuisance from the sewage were not abated, 2275, 2276——Applications on the subject to the river Lea trustees, and the New River Company, but without effect, 2276. 2279. 2288——Circumstance of no application having been made to the Board of Trade, as suggested by Mr. Lush, 2279–2289.

Collyer, James. (Analysis of his Evidence.)—Maltster at Ware: confirms the evidence of Mr. Chuck as to the exceedingly offensive matter poured into the Lee above Ware from the Mainfold Ditch, 2205 *et seq.*

Compulsory Purification. Statement to the effect that if Luton and other towns did not take the necessary steps for excluding injurious matter from the river, the requisite works should be devised and carried out by Government authorities, and the cost charged upon the local rates, *Rawlinson* 933-945——Expectation that the local authorities of towns bordering on the Lea will soon take active steps for dealing with the sewage if the conservators are armed with powers to interfere, *ib.* 954-960.

See also *Sewage. Upper Waters of Lee.*

Condy's Fluid. Improvement by using Condy's liquid as a purifier of sewage in conjunction with the lime process, *Taylor* 2532–2534.

Conservancy Board. Sundry reasons for the recommendation that the charge of the entire watershed of the Lee be under one Conservancy Board, *Rawlinson* 7–12. 62–73; *Tyler* 191 *et seq.*; *Way* 398, 399——Impossibility of preventing pollution unless the Conservancy Board have entire control of the watershed, *Rawlinson* 11——Contemplated power in the Board to make intercepting sewers, buy up mill rights, and take such other steps generally as are essential for the purifying of the river, *ib.* 112.

Statement in regard to its having been arranged between the trustees and the Board of Trade as to the representation of the former at the new Conservancy Board, *Marchant* 528–542. 548, 549. 730, 731——Importance of the navigation interest being fully represented at the new board, *ib.* 580, 581——Examination relative to the constitution of the proposed Conservancy Board, as regards not only the navigation, but the purification of the river, *ib.* 590-608. 649–657. 673 *et seq.*——Consideration of the course proposed as regards the electing body for the navigation representatives, twenty members of the River Lee Trust being retained as the electing body, *ib.* 700-710. 716-731——Approval of the constituent body being limited to a distance of three miles from the river, *Manser* 771-773——Witness has long been of opinion that a portion of the conservators or trustees of the Lee should be chosen by election, *Wicks* 877.

Conclusions arrived at by the Committee as to the constitution of the new board, and the mode of election of the members; total of thirteen members, *Ev.* 63.

Clauses proposed with reference to the incorporation of the Lee Conservancy Board, and the date of commencement of their powers, *Ev.* 98.

Clause proposed by Mr. Parkes, and approved of by the Committee, relative to the qualification of electors of representatives of landlords, *Ev.* 98, 99; *Rep.* vii.

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Cook, Messrs. (*East London Soap Works*). Evidence to the effect that the refuse matter from Messrs. Cook & Sons' soap-works near West Ham, though coming into the Lee below the point of intake of the water companies, should be brought up to a certain standard of purity before entering the river, *Rawlinson* 973-997. 1059–1047.

Conclusion arrived at by the Committee with regard to Messrs. Cooks' claim to drain their sewage direct into the Lee, *Ev.* 97.

Clause proposed on the part of the promoters, and clause proposed on the part of Messrs. Cook, with reference to the question of arbitration in the event of Messrs. Cook being compelled to discontinue the discharge of sewage into the Lee, *Ev.* 123——Adoption by the Committee of the clause proposed by the promoters, *ib.*

Corporation of London. Decision by the Committee that one member of the Conservancy Board is to be elected by the Corporation of London, *Ev.* 63.

Cowper, The Right Hon. Earl. (Analysis of his Evidence).—Is the owner of all the property on the Mimram from its junction with the Lee up to Pegswell, and testifies to the purity of the stream, 1425–1430——Impression that the other tributaries of the Lee above Hertford are clear and pure, 1431, 1432——General objection by the landowners to the Bill before the Committee; petition by them to that effect, 1433–1442——Unnecessary and obnoxious character of the restrictions proposed to be enforced through the Conservancy Board as regards the upper portion of the Lee, 1435–1442——Possibility of much vexation through the proposed regulations in regard to fishing, 1440–1442. 1471, 1472.

Cross-examination to the effect that the stringent regulations which the Conservators are, by the Bill, empowered to apply, are not called for by the present state of things above Hertford, and may be productive of great grievance, 1443 *et seq*——Non-objection to regulations as to bathing, if limited to a distance of a mile from the intake of the New River Company, 1461–1465——Great inconvenience if sheep-washing were unduly interfered with, 1467–1470.

Croydon. Opinion that the effluent water, after the sewage of any place on the Lee has been dealt with by irrigation, should be clarified up to the standard required at Croydon before going into the river, *Rawlinson* 903. 906–908——Profitable result of the system of sewage irrigation at Croydon, *ib.* 961——Facilities at Croydon as compared with Luton for applying the sewage to land by gravitation, *Williams* 1731–1743.

D.

Debt (*Lee Trust*). Loans to the amount of 178,000 *l.* raised by the trustees under the Act of 1850 in order to carry out the required works for the maintenance and improvement of the navigation, *Marchant* 517-520——Contributions from the New River and East London Companies, upon the faith of which the debt of the trustees has been largely increased, *ib.* 559-568——Opinion that the bond debt would hot have been so large had proper care been exercised, *Manser* 832.

Recommendation by the Committee with a view to the Treasury authorising the Public Works Loan Commissioners to advance to the Board of Conservancy constituted by the Bill such funds as may be necessary to pay off the existing debenture debts of the trustees of the Lee and Stort Navigation, *Rep.* xiii.

See also *Bondholders.* *Surplus Income.*

Denton, Bailey. Views of Mr. Bailey Denton as to the best mode of dealing with the sewage of Luton, and as to the effect of irrigation upon oxalic acid, *Woakes* 1270. 1285–1287.

Drainage. Contemplated power in the Conservancy Board to facilitate works of drainage by landowners and others for the improvement of the area of the river, *Rawlinson* 11.

Dredging. Limited saving of the Lee trustees, under the head of dredging, by the present Bill, *Marchant* 746–749——Considerable expense incurred in dredging and in liming, in order to keep the river in a proper state for navigation, *Beardmore* 1513-1516. 1538–1540——Information relative to the dredging operations of the trust, these being undertaken with reference more especially to the navigation, *Marchant* 2782–2795——Necessity of the continuance of dredging even though the sewage be excluded, *ib.* 2845–2848.

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E.

Earth-Closets. Suggestion that villages and single houses might use the dry earth closet system as a means of excluding the excreta from the rivers and streams, *Rawlinson* 901. 905, 906——Facilities for the use of earth-closets by means of a company already in operation, *ib.* 1057–1059——Objection to dry earth-closets as a means of disposing of sewage or excreta, *Trethewy* 1403–1410.

East London Soap Works. See *Cook, Edward, & Co.*

East London Waterworks Company. Importance of the intercepting works or catch-water dyke constructed by the East London Company, as well as the brooks which discharge into the dyke, being brought under the jurisdiction of the Conservancy Board, *Rawlinson* 42–52——The catch water drain, constructed and maintained by the East London Company, should be transferred to the Conservancy Board, and persons making any additional use of it should be rated for the purpose, *ib.* 82–90——The Conservancy Board should not maintain the catch-water drain made by the East London Company, but should have jurisdiction over it, *ib.* 168–172.

Examination as the benefit to be conferred upon the Company by the proposed exclusion of sewage matter, and as to the question of saving of outlay by the Company through not having to construct intercepting sewers, *Tyler* 297–316.

Approval of the representation of the East London Company at the Conservancy Board as having an interest in the purification, *Marchant* 604, 605.

Decision by the Committee that two members of the Conservancy Board are to be elected by the East London Company, *Ev.* 63.

Injurious effect of the works of the East London Company upon the state of the river, *Marchant* 2832–2837.

See also *Water Companies. Water Supply.*

Election of Trustees and Conservators. See *Conservancy Board. Trustees.*

Ellicombe, Richard. (Analysis of his Evidence).—Explains that the original Bill of 1854 did not contain the 8th clause relative to the adoption by the New River Company of Higgs' process of purification at Hertford, 2550–2553.

Expenditure of Trustees. Objection on the part of the Lee Trustees to their being saddled with any additional expenses under the Bill, though the Bill may save them expense on the score of dredging, *Marchant* 552–558——Approval of the water being purified at the expense of the towns and of the consumers, but not at the trustees' expense, *ib.* 629–633——Increase of expenditure through the improvement works carried out, *ib.* 742, 743.

Comment on the undue expenditure by the trustees, *Manser* 781–783——Statement that the expenditure by the trustees has not had exclusive reference to the navigation, *ib.* 829, 830.

Outlay of about 40,000 *l.* on the works, &c. from Bow Creek to Old Ford Lock, *Beardmore* 1514, 1515——Considerable outlay upon works in excess of the works empowered by the Act of 1850, *ib.* 1519–1529.

Sundry details relative to the annual expenditure of the trust in respect of salaries and establishment charges, as well as for dredging, rents, law charges, &c., *Marchant* 2693–2735.

Expenses of Bill. Protest always made by witness against the trustees being saddled with the expenses of the present Bill, *Marchant* 543–546.

F.

Fishing Rights. Very objectionable clause in the Bill as regards interference with fishing rights, *Trethewy* 1362–1364——Possibility of much vexation through the proposed regulations in regard to fishing, *Lord Cowper* 1440–1442. 1471, 1472.

Flood Water. Contemplated discharge of all flood waters at Ware, Cheshunt, &c. into the river, *Rawlinson* 1019–1021. 1029. 1035, 1036.

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G.

Glass, John. (Analysis of his Evidence).—Is traffic manager of the River Lee; has been acquainted with the navigation for more than thirty years, 1482–1484—States that all the barges on the Lee are above forty tons, and that the boats or punts under that size are not regular traders on the Lee, and only come occasionally from the Grand Junction and the Regent's Canal, 1486–1510—There are about seventy regular trading barges on the Lee, including the Stort, 1503, 1504.

Gravel. Peculiarity of toll in the case of gravel, the charge being much higher for gravel going up than down the river, *Manser* 837–840.

H.

Hatfield. Explanation of the mode in which the authorities at Hatfield deal with the sewage, and divert it from the river; difficulty in selling the sewage matter, *Tyler* 207–218—Objectionable state of the river at Hatfield and Wheathampstead, *ib.* 202–206. 272–289.

Health. See *Sewage. Water Supply.*

Hertford. Reference to the purifying process applied to the sewage of Hertford before the discharge of the sewage water into Mainfold Ditch; nuisance to be created if the water were allowed to remain stagnant, *Rawlinson* 98–100—Mode of treatment of the sewage at Hertford, the effluent water being passed into the Lee by a channel under the New River, *Tyler* 219–223. 230—Expense of 700*l.* a-year involved in the process used at Hertford, whilst there is hardly any return, *ib.* 224—Objectionable manner in which the sewage of Hertford is disposed of on the land, *Way* 408–411.

Expenditure by the New River Company in certain works at Hertford for removing the solid matter from the sewage, the works, however, not removing all deposit from the effluent water, *Marchant* 570–577—Large interest of Hertford in the navigation; influence of Hertford in electing the trustees at the new board, *ib.* 716–726—Non-interference by the Act with the sewage works at Hertford carried out by the New River Company, *ib.* 750, 751.

Decision of the Committee as to the mode of representation of Hertford at the New Conservancy Board, *Ev.* 63.

Further reference to the character of the effluent water discharged into the river near Ware, from the works of the New River Company, *Rawlinson* 998–1000.

Opinion arrived at by the Committee (on 4th May), that the Board of Conservancy should not have power to stop up the outfall so long as the town complied with the conditions of the Act of 1854, and the subsequent Amendment Act, *Ev.* 96.

Evidence to the effect that the process of purification by lime, adopted at Hertford, does not remove from the sewage the matter in solution, which is far more injurious than the solid matter precipitated by the lime, *Way* 1843 *et seq.*—Very little value of the sewage manure obtained at Hertford under the precipitation system, *ib.* 1853–1857—Opinion that Hertford should be restricted from pouring its sewage into the Lee on the present plan, *Way* 1877; *Rawlinson* 2315. 2321, 2322—Approval generally of the Hertford works for the particular purpose for which formed; they are, however, much less complete than the works at Leicester, *Way* 1913–1917. 1931–1936.

Statement that since the sewage of Hertford has come into the Lee, through the Mainfold Ditch, the river has become very filthy at that point, and that gudgeons, which were formerly very abundant, have almost totally disappeared, *Reason* 2072 *et seq.*—Great fouling of the river by the Hertford sewage, as discharged from the Mainfold Ditch; exceedingly foul state also of the Mainfold Ditch itself, *Chuck* 2141 *et seq.*—Witness used formerly to catch gudgeon by thousands, but now scarcely one is to be caught, *ib.* 2159—Witness, who is a maltster at Ware, confirms the evidence of Mr. Chuck as to the exceedingly offensive matter poured into the Lee above Ware from the Mainfold Ditch, *Collyer* 2205 *et seq.*

Recent inspection by witness of the river Lee and the Mainfold Ditch, when he found that very filthy stuff was discharged into the river from the Hertford works, *Manser* 2225-2237—Constant nuisance to the town of Ware from the manner in which the sewage of Hertford is dealt with, and is discharged into the river through the Mainfold Ditch; great increase in the nuisance of late, *Cobham* 2263, 2264. 2274, 2275. 2277, 2278. 2292–2311—Power of the New River Company under the Act 15 & 16 Vict. c. 39, to take the Hertford sewage two miles below the present outlet; purchase of some land for the purpose, though the plan was not carried out, *ib.* 2265–2273—With regard

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regard to the green scum or confervæ near the outlet of the Hertford works, this arises from organic matter coming from the sewage or some other source, *Taylor* 2434–2439.

Witness believes that the Act of 1854 was in the first instance only intended for the diversion of the sewage of Hertford below the intake of the New River Company, *Muir* 2546–2548——For the supply of Hertford there is power to take a large quantity of water daily from the river, *ib.* 2549——The original Bill of 1854 did not contain the 8th clause relative to the adoption by the New River Company of Higgs' process of purification at Hertford, *Ellicombe* 2550–2553.

Statement as to its not being proposed that Hertford or the riparian owners should contribute towards the increased purification of the river supply of Hertford chiefly from a well, *Marchant* 2849–2864.

Liability proposed by the Committee to be thrown upon the New River Company in respect of the Hertford sewage and the Mainfold Ditch, unless certain arrangements and conditions are agreed to by the company, *Ev.* 180.

See also *Ware.*

Higgins, John. (Analysis of his Evidence.)—Is a pump-fitter at Luton, and calculates that it would cost upwards of 1,000*l.* a year to work the pumps required for lifting the sewage a height of 100 feet, 1821–1842——Some land might probably be found suitable for irrigation by pumping to this height, 1826–1828.

Hoddesdon. Flow of drainage into the river at Hoddesdon, *Tyler* 242.

Hunt, Richard (Analysis of his Evidence.)—Is a miller and malster at Stanstead, and has been conversant with the river Lee for thirty years, 841–843——Large proportion of traders on the Lee Trust in former years, the navigation having then been efficiently and economically administered, 844–848——Amendment required in the constitution of the trust, by including the riparian owners and the traders on the river in the elective body, 849–853.

Better state of the river, and greater depth of water twenty years ago than at present, the trustees having since sold the water away, 854–856. 874——Complaint as to the high tolls still levied on wheat and malt, whilst on flour and other articles the tolls were not reduced till after the trade had been withdrawn from the river by railway competition, 857–870——General feeling among the traders on the river that the navigation would be better attended to by persons amenable to some elective responsibility, 871–873.

I.

Intercepting Sewers. Objection to a system of intercepting sewers for the Lee on a large scale, *Rawlinson* 912, 913. *See* also *East London Waterworks Company.*

Irrigation (*Sewage Utilization*). Facilities in the valley of the Lee for applying the sewage of the towns to the irrigation of the land, *Way* 403–407——Absence of difficulty in using sewage for irrigation in time of frost, *ib.* 412–414——Conclusion that in the case of towns the best mode of dealing with the sewage and rendering it harmless, is by applying it to land, *Rawlinson* 901–904——Whether in the middle or upper districts of the Lee, each town having a population of 8,000 upwards may reasonably be expected to deal with its sewage by irrigation profitably, *ib.* 912, 913.

Information relative to the cost of works for lifting sewage and applying it by gravitation to the land, *Rawlinson* 963–972——Statement in refutation of the view that the constant application of sewage to land has the necessary effect of turning it into a swamp or of rendering it foul, *ib.* 1054–1056——Very large crops of hay and grass obtained through sewage irrigation, such grass being excellent for feeding purposes, *ib.* 1056. 1060–1062.

Objections to the irrigation process as the means for removing the oxalic acid and other injurious ingredients from the sewage, *Woakes* 12. 68 *et seq*——Examination with further reference to the question, whether the application of the Luton sewage to the land would not effectually deodorise it; admission that chalk has the effect of neutralising oxalic acid in the sewage, *ib.* 1277 *et seq.*

Conclusion of the Committee as to the expediency of certain clauses being altered, so as to give the towns the means of making irrigation works, or any other works, for the disposal of the sewage, *Ev.* 97.

Great difficulty in obtaining land along the river for the purpose of sewage irrigation, *Trethewy* 1391–1394——Doubt as to the sufficiency of irrigation as a means of disposing of and purifying the sewage of the villages and towns on the river, *ib.* 1394–1402, 1410–1412.

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Irrigation (*Sewage Utilization.*)—continued.

Effectual purification by means of the irrigation process, *Way* 1852——Conclusion further expressed as to the importance of placing sewage on the land as an efficient means of abstracting all impurities from it, *ib.* 2032. 2037–2049——Less valuable effect of sewage for irrigation purpose when it has been first precipitated, *Lucas* 2340–2348.

See also *Croydon. Luton,* 5.

J.

Jurisdiction of Conservancy Board. Concurrence in the view as to the importance of including the whole of the water-shed of the Lee in the jurisdiction of the proposed Conservancy Board, *Rawlinson* 7–12. 62–73; *Tyler* 191 *et seq.*; *Way* 398, 399——Outline of the extent and course of the Lee for the purposes of the proposed jurisdiction, *Rawlinson* 17–31——Importance of the jurisdiction by the Conservancy Board being extended to the area above Hertford, even though the river above that point may flow chiefly through an agricultural country, *ib.* 62–73——Enlarged powers of jurisdiction necessary in the Board, *ib.* 112.

Clause proposed and agreed to, by which it is specified that the jurisdiction of the Lee Conservancy shall not extend below the south boundary stone, *Ev.* 124.

L.

Landowners. Proposition submitted by counsel with respect to the representation of the riparian proprietors upon the Board, *Ev.* 54——Clause proposed with reference to the election and tenure of office of Conservators representing landowners, *ib.* 98.

General objection by the landowners to the Bill before the Committee; petition by them to that effect, *Lord Cowper* 1433–1442——Communication of witness with several landowners on the river, all of whom concur in objecting to certain powers of interference proposed to be given to the new Conservancy Board, *Trethewy* 1365–1384.

Letheby, Dr. Dissent from a statement by Dr. Letheby, as to the self-purification of sewage discharged into a river, and having subsequently a run of seven or eight miles, *Rawlinson* 67–69. 119–125. 136—Condition subject to which witness concurs in the views of Dr. Letheby, as to the effect of rivers in purifying sewage after a run of some miles, *Taylor* 2413.

Lime Process (*Purification of Sewage*). Means of removing by far the greater portion of the mischeivous matter from sewage by using the lime process, *Rawlinson* 127, 128——Injury to the water at the point where it is allowed to go into the river, even though deodorised by lime, *ib.* 130–136. 175, 176——Exclusion of deleterious matter generally by the lime process, though witness does not say that very little such matter is left, *Tyler* 344–338. 358–360.

Inefficiency of any process of lime precipitation as a means of thoroughly purifying sewage, and rendering it unobjectionable when passed into a river, and used for domestic purposes, *Way* 1843 *et seq.*——Dissent from the views of Mr. Rawlinson, if he meant by a certain statement to imply that nine-tenths of the injurious matter in sewage may be removed by the lime process, *ib.* 1859–1861. 1901–1908——Advantage of the lime process as applied to sewage, rather than of discharging the sewage in its natural state, *ib.* 1982–1986. 2030–2032——Further statement that the matters in solution not operated upon by the lime process are decidedly more injurious than the solid matters removed, *ib.* 2007–2029.

Explanation of former evidence relative to the proportion of mischeivous matter to be removed from sewage by lime precipitation; concurrence with Professor Way on this point, *Rawlinson* 2312–2314. 2324–2326.

Various processes for the treatment of sewage by precipitation, that by means of ordinary burnt lime being the most effectual, *Taylor* 2440–2452——Large proportion of the injurious matter removed by the lime process, *ib.* 2449–2452.

See also *Condy's Fluid. Hertford. Luton,* 3. *Sewage. Stroud.*

Lucas, William H. (Analysis of his Evidence.)—Civil engineer; has prepared several plans for the precipitation of sewage and for its application to land, 2327–2331——Information relative to the precipitation works in operation at Stroud, and their success as regards the manure produced and the purification of the effluent water, 2332–2339. 2349–2365——Less valuable effect of sewage for irrigation purpose when it has been first precipitated, 2340–2348.

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LUTON:

1. *Question of amending the Petition of the Luton Local Board.*
2. *Character of the Sewage of Luton, and of the Sewerage.*
3. *Details in connection with the Process used in the treatment of the Sewage.*
4. *Question as to the Character of the Effluent Water and its Effect upon the Condition of the River.*
5. *Question of applying the Sewage to the Irrigation of Land.*
6. *Other details and suggestions generally.*
7. *Clauses proposed by Counsel, and conclusion arrived at by Committee.*

1. *Question of amending the Petition of the Luton Local Board.*

Discussion between the counsel and the Committee upon the question of amending the petition of the Luton Local Board of Health, *Ev.* 15–17.

2. *Character of the Sewage of Luton, and of the Sewerage.*

Exceedingly objectionable character of the sewage of Luton, *Rawlinson* 175, 176—— Situation of Luton at three and a half miles from the source, the population of 1861 having been 15,329, *Tyler* 194, 195——Only one-third of the town is at present sewered, but there is a prospect of the whole town being sewered as soon as the water supply is sufficient, *ib.* 198. 388——Very injurious character of the sewage from the straw plait works and bleaching works, *ib.* 201 —— Prospect of a large increase of deleterious matter being conveyed into the river from Luton, *ib.* 385–389.

Witness is not aware that there are several nuisances at Luton, or that fever arises from them, *Sandoe,* 1163–1165——Inaccuracy of a statement that a large portion of the town is not purified at all and drains into the sewers, *Williams* 1197–1199.

3. *Details in connection with the Process used in the Treatment of the Sewage.*

Adoption at Luton of the lime process in the treatment of the sewage; expensive character of the process, whilst much impurity goes into the river from the straw plait works, &c., *Tyler* 196–201.

Establishment of the Luton Board in 1854, at which period the practice of draining the sewage of the town into the Lee had been in force from time immemorial, *Bailey* 1073–1075——Application to Chancery in 1855 to restrain the Board from discharging the sewage into the Lee, *ib.* 1076——Injunctions subsequently granted in April 1858, by which it was required that the sewage should be subject to Higgs' process of purification; steps previously taken by the Board to this effect, pending the proceedings, *ib.* 1077–1080.

Very large outlay by the Luton Board in order to carry out the purification process, there being also an annual expense or loss of 500 *l.* in carrying on the works, *Bailey* 1080–1083. 1128–1133——Application of Higgs' process to the whole of the sewage of the town, *ib.* 1095–1097——Understanding as to the suit against the Luton Board having been instituted at the instance of the New River Company, *ib.* 1143–1146.

The solid sewage is now removed by filtration and lime, and nothing but the water is passed into the river, *Sandoe* 1160–1162. 1178–1184——Loss of about 500 *l.* a year now incurred in keeping up the purification process after selling the solid sewage as manure, *Williams* 1200, 1201. 1257–1259——Efficiency of the lime process at Luton for neutralising all injurious effects from the oxalic acid in the sewage, *Woakes* 1268. 1279——Absence hitherto of any dissatisfaction with the operation of the sewage works, or with the state of the river, *Williams* 1709, 1710——Willingness of the Local Board to give the sewage to any one free of expense, as the works now involve a net outlay of 500 *l.* a year, *ib.* 1711–1729.

4. *Question as to the Character of the Effluent Water, and its Effect upon the Condition of the River.*

Evidence to the effect that the sewage of Luton, though rid of the greater portion of its impurity by the lime process, would still have an injurious effect upon the river at Hertford twenty miles lower down, *Tyler* 329–350.

Almost pure state of the effluent water as it goes into the river, every care being taken to prevent complaints, *Bailey* 1084–1087——Witness has frequently seen fish in the river at the outfall, so that the discharged water cannot be very impure, *ib.* 1085. 1107—— Cross-examination upon the question whether the process of purification used at Luton is not really a failure; dissent hereon from certain evidence before the Rivers Pollution Commission, as to the prejudicial effect of the water upon the health of the town, *ib.* 1098–1127.

Witness has analysed the water of the Lee three miles from the outfall of the Luton sewer, and has found it as free from impurity as any deodorising process applied to the sewage can render it, *Woakes,* 1264–1268——Belief that at Hertford no deleterious ingredients can exist in the river from the Luton sewage as at present purified before discharge, *ib.* 1273–1276——Denial that the health of Luton is now in an unsatisfactory state, though the typhoid fever, some time since, probably arose from the character of the water supply, *ib.* 1323–1328——Pure character of the water at Luton further

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LUTON—continued.

4. *Question as to the Character of the Effluent Water,* &c.—continued.

adverted to, no change having been found necessary in the sewage works, *Woakes* 1753–1763. 1766, 1767. 1785–1787.

Witness produces two samples of water, one taken at a point below the works, about a quarter of a mile before the effluent water reaches the Lee, and the other taken about twenty yards after junction with the Lee; unobjectionable character of both samples, *Sandoe* 1788–1813.

Difficulty in tracing the actual effect of the Luton sewage upon the river lower down, *Way* 1880–1898——Evidence in support of the conclusion that the effluent sewage-water at Luton after purification by lime, has no pernicious effect upon the river after travelling a distance of ten or twelve miles in the stream, *Taylor* 2377, *et seq.*

Explanation in connection with two further samples recently taken by witness and handed to Professor Taylor for analysis; one was taken from the pipe discharging from the Luton works, and the other from the river below Mr. Leigh's park, *Sandoe* 2453–2484.

Witness has completed his analyses of two samples of water taken at or near Luton, and submits his report on the subject, *Taylor* 2485–2488——Particulars relative to the quality of each sample, the general result being that there is nothing in either sample which can be called pernicious or noxious to health, *ib.* 2488 *et seq.*——Conclusion as to the harmlessness of the sewage water discharged at Luton, when mixed with the great bulk of the river, *ib.* 2496–2499. 2544.

5. *Question of Applying the Sewage to the Irrigation of Land:*

Belief that Luton may save existing expense by dealing with its sewage in a different manner, *Rawlinson* 137——Benefit to Luton itself as well as to the inhabitants of London, by remodelling their system of treating the sewage, *ib.* 138——Facilities at Luton for utilising the sewage for agricultural purposes, whereby much expense would be saved, *ib.* 177–183——Approval of Luton being compelled to pass its sewage on to the land; data for the conclusion that the outlay would be remunerative by reason of the large crops to be produced, *ib.* 941. 955–972——Absence of difficulty in obtaining land for the purpose, *ib.* 961. 1050, 1051——Belief that on the whole Luton would save money by adopting the irrigation method in lieu of the present system of lime purification, *ib.* 1048–1052.

Obstacle to applying the sewage to land save at a great expense, whereas the town is very poor, *Bailey* 1089–1094——Probable sufficiency of 250 acres to receive the sewage of the town in irrigation; difficulty in obtaining land for the purpose at the ordinary agricultural rent, *ib.* 1134–1142——It would be exceedingly difficult to obtain a sufficient quantity of land at Luton to which the sewage could satisfactorily be applied, *Sandoe* 1149–1159——It would be necessary to lift the sewage from 100 to 200 feet in order to get rid of it by irrigation; witness has not calculated the cost, *ib.* 1166–1172.

Witness submits that Luton having gone to a large expense for the purification of its sewage, and being a very poor town, should not be saddled with the additional expense of irrigation works, *Williams* 1188. 1196. 1216. 1261——Witness supplies sundry details relative to the land in the neighbourhood of Luton, and contends that sufficient land cannot be obtained for sewage irrigation unless by paying a high price for it, and by lifting the sewage to a great height at heavy expense, *ib.* 1189–1195. 1203–1256. 1261——Probable quantity of land required for utilising the sewage in the way of irrigation, *Woakes* 1329–1332.

Grounds for the conclusion that the application of the sewage to land would not be a profitable mode of disposing of it on account of the expense of lifting, *Williams,* 1717–1752. 1769. 1783. 1784——Witness is a pump-fitter at Luton, and calculates that it would cost upwards of 1,000 *l.* a year to work the pumps required for lifting the sewage a height of 100 feet, *Higgins* 1821–1842——Some land might probably be found suitable for irrigation by pumping to this height, *ib.* 1826–1828.

6. *Other Details and Suggestions Generally:*

Hardship on the town if the present Bill be passed, *Bailey* 1088, 1089——Non-objection to the Conservators of the Lee dealing with the sewage of Luton at their own expense, *Williams* 1197——Satisfaction to Luton if the standard of purity for the effluent water were defined by the Bill, and if the Conservancy Board were the established authority in the matter, *ib.* 1216–1218——Information relative to the rateable value of Luton, the heavy amount of the rates and the poor character of the place, *ib.* 1691–1704. 1764, 1765——Very large proportion of the rates, and large debts raised for the purposes of the local Board of Health, *ib.* 1700. 1705–1708.

Objection to the people of Luton being called upon to provide pure water for the New River Company; statement hereon as to the prescriptive right of Luton to drain into the Lee, *Williams* 1768. 1770–1782.

Opinion that Luton should be prevented from discharging its sewage into the river on the present plan, *Way* 1876; *Rawlinson* 2315. 2321, 2322.

7. *Clauses*

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Luton—continued.

7. *Clauses proposed by Counsel, and conclusion arrived at by Committee.*

Proposed clause on the subject of the supply of water from the Lee, for the town of Luton, *Ev.* 92.——Clause proposed on behalf of the town of Luton, with a view to the continuance of the system of purification now in force, *Ev.* 92, 93.

Conclusion arrived at by the Committee on 4th May, that the powers of the new Conservancy Board, should not be exercised to stop up the drainage into the river at present existing, so long as the town complied with the conditions of the decree of the Court of Chancery, *Ev.* 96.

Amendment by the Committee of the clause, in the case of Luton, relative to the process of purification; satisfaction to be given to the Home Office, in the event of dispute, *Ev.* 179, 180.

Adoption of clause prohibiting the discharge into the river of the sewage of any house not connected with the present sewerage and drainage works of the Local Board, *Rep.* xii, xiii.

See also *Sewage.* *Water Supply.*

M.

Main Drainage Works.

Belief as to there being overflows from the main drainage system of the metropolis into the River Lee district, though to what extent, or at what point witness is not aware, *Rawlinson* 1064-1070.

Mainfold. Disapproval of any exclusion of Mainfold Ditch from the operation of the Act, or from the jurisdiction of the new Conservancy Board, *Rawlinson* 91–107.——Statement to the effect that the portion of Mainfold Ditch conveying water into the New River should be excluded from the present Bill, but not the portion conveying the effluent water from Hertford to the River Lee, *Tyler* 260–271——*See* also *Hertford.*

Malt. Large malting trade at Ware, nearly all the malt going by the river, *Marchant* 491–495.

Manser, Alfred. (Analysis of his Evidence.)—Is a miller and coal merchant, having one mill on the Lee and another on the Lynch, which runs into the Lee, 752, 753——Formation of an association for the purpose of protecting the interests of traders on the Lee, witness being the honorary secretary, 754–761——Instances of complaints by the association against the administration of the river by the trustees, 761–763—— Great want of a proper representation of the traders, and the riparian owner, upon the trust, 764–769. 771–775——Expediency of the trustees being elected personally instead of by proxy, 770——Approval of the constituent body being limited to a distance of three miles from the river, 771–773——Large representation of the trading interest at the Board of Trustees in former years, 775–780——Undue expenditure of late years by the trustees without any corresponding improvement in the state of the navigation, 781–783——Good state of the navigation twenty years ago, 783——Suggestion that each owner of a barge should have a vote in the election of trustees, as members of the proposed Conservancy Board; consideration of objections to this proposal, 784–794.

Examination as to the data for the statement that the traders on the river had good grounds of complaint against the management of the navigation, and had made several complaints to the trustees, 797, *et seq.*——Application made to the trustees, with a view to a reduction of tolls, these not having been reduced in proportion to the increase of business, 814–819. 822–827——Origin of the formation of the traders' association further adverted to, 820, 821.

Statement that the expenditure by the trustees has not had exclusive reference to the navigation, 829, 830——Opinion that the bond debt would not have been so large had proper care been exercised, 832——Valuable check upon the expenditure if there were an improved constituency for the election of trustees, 833, 834——Peculiarity of toll in the case of gravel, the charge being much higher for gravel going up than down the river, 837–840.

[Second Examination.] Recent inspection by witness of the River Lee and the Mainfold Ditch, when he found that very filthy stuff was discharged into the river from the Hertford works, 2225–2237——Much purer state of the river at Standsted Lock, and Charlton Mill, which are, respectively three miles and six miles, below the Hertford works, 2238–2241. 2244–2260.

Marchant, John, Jun. (Analysis of his Evidence.)—Is clerk to the River Lee Trust, 482——Information relative to the attendances at the meetings of the Trust, 484–490——Great benefit of the navigation to the adjoining lands, and to the towns and villages, through which it passes, 490–500—— Large malting trade at Ware, nearly all the malt go

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Marchant, John, Jun. (Analysis of his Evidence)—*continued.*

going up the river, 491–495——Importance also of the navigation, as regards the manufacture of bricks between Ware and Hertford, 496, 497——Non-payment of the trustees, their expenses even not being paid, 501.

Great improvements effected by the trustees in deeping and straightening the bed of the river, and in renewing and enlarging the locks, &c., 502–509——Large increase of traffic on the river since 1851, the revenue having doubled, although the tolls have been reduced, 510–516——Loans to the amount of 178,000 *l.* raised by the trustees under the Act of 1850, in order to carry out the required works, 517–520.

Explanation as to the River Lee trustees having published a notice of application to Parliament in 1867, which was not followed up on its being known that Government was about to act in the matter, 521–527. 727–731——Statement in regard to its having been arranged between the trustees, and the Board of Trade, as to the representation of the former at the new Conservancy Board, 528–542. 548, 549. 730, 731——Protest always made by witness against the trustees being saddled with the expenses of the present Bill, 543–546.

Communication between the Board of Trade and the trustees, relative to the provisions in the Bill affecting the navigation, 550, 551——Objection, on the part of the trustees, to their being saddled with any additional expenses under the Bill, though the Bill may save them expense on the score of dredging, 552–558——Contributions from the New River and East London Companies, upon the faith of which the debt of the trustees has been largely increased, 559–568——Expenditure by the New River Company in certain works at Hertford for removing the solid matter from the sewage, the works, however, not removing all deposit from the effluent water, 570–577.

Importance of the navigation interest being fully represented at the new Board, 580, 581——The trustees have no beneficial interest in the tolls, 582–584——Total of sixty-five trustees; large proportion of these who do not attend the meetings of the trust, 585–589. 672–699——Examination relative to the constitution of the proposed Conservancy Board, as regards not only the navigation, but the purification of the river, 590–608. 649–657. 672 *et seq.*

Reason for the New River Company having a representative at the Board, 596–603——Representation of the East London Company as having an interest in the purification, 604, 605——Representation of the Metropolitan Board of Works as protecting the interests of the ratepayers and consumers, 606–608——Duty of the trustees at the new Board to look after the interests of the existing bondholders, as well as the navigation, 609–624. 744–746——Representation indirectly of the towns on the river, by some of the trustees being chosen from the members for the counties through which the river runs, 625–628. 649–657.

Approval of the water being purified at the expense of the towns and of the consumers, but not at the trustees' expense, 629–633——Statement to the effect that the trustees, though appearing technically as opponents of the Bill, are not really opposed to the Bill as it now stands, 634–648——Explanation as to the mode proposed by the trustees in their Parliamentary notice, for raising the rates required for the diversion of sewage from the river, 658–663.

Extent to which the trustees have taken action in order to enforce the exclusion of impurities from the river, as interfering with the navigation, 664–671——Exceptional instance of traders being represented at the Board, as at present constituted, 685–699——Consideration of the course proposed as regards the electing body for the navigation representatives, twenty members of the River Lee Trust being retained as the electing body, 700–710. 716–731.

Doubt as to the traders on the river being dissatisfied with the administration of the navigation, 703–707. 732–738——Improved state of the navigation further adverted to, 711, 712——Statement as to there being no published audit of the accounts of the trustees; the deputy-chairman is the auditor, 713–715——Large interest of Hertford in the navigation; influence of Hertford in electing the trustees at the new Board, 716–726.

Belief that none of the traders on the river are debenture holders, though several of the trustees are large holders, 739–741——Increase of expenditure through the improvement works carried out, 742, 743——Limited saving of the trustees under the head of dredging by the present Bill, 746–749——Non-interference by the Act with the sewerage works at Hertford carried out by the New River Company, 750, 751.

[2nd Examination].—Statement showing the powerlessness of the trustees, under their Act, to enforce the exclusion of sewage, &c. from the river, 2682–2692. 2736–2771. 2823–2831——Sundry details relative to the annual expenditure of the trust in respect of salaries and establishment charges, as well as for dredging, rents, law charges, &c., 2693–2735.

Examination upon the subject of law suits undertaken by the trustees against the Metropolitan Board of Works and the Tottenham Local Board, an injunction having been

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Marchant, John, Jun. (Analysis of his Evidence)—*continued.*

been obtained in each case against sewage discharge into the river, 2741–2767. 2823–2831——Admission as to the trustees having been desirous of additional powers to prevent the discharge of sewage, though they did not contemplate being saddled with the additional expense, 2768–2771——Several points below the intake of the water companies, where it is necessary to enforce the exclusion of impurities; admission that the companies have no particular interest below the intake, 2772–2781.

Information relative to the dredging operations of the trust, these being undertaken with reference more especially to the navigation, 2782–2795——Expediency of the steps taken for the removal of dead dogs and carcasses from the river, in the interests of the navigation, 2796–2799——Evidence to the effect that the trust is not in a position to provide funds for the proper carrying out of the Bill as regards the purification of the river, 2800–2822——Average surplus income of about 300 *l.* a year, whilst there is a debt of 180,000 *l.*; 2809–2811. 2822——Obstacle to an increase of tolls in order to increase the surplus income, 2812–2821.

Injurious effect of the works of the East London Company upon the state of the river, 2832–2837——Entire inadequacy of a contribution of 500 *l.* a year on the part of the companies, 2842——Requirement of a contribution of 1,500 *l.* a year irrespectively of any exercise of jurisdiction below the intake of the companies, 2843, 2844——Necessity of the continuance of dredging, even though sewage be excluded, 2845–2848——Statement as to its not being proposed that Hertford or the riparian owners should contribute towards the increased purification of the river; supply of Hertford chiefly from a well, 2849–2864.

Meeson, John. (Analysis of his Evidence.)—Is a wharfinger and bargeowner on the Lea, and has known the river for many years, 1647–1652——Denies that the construction of Bow lock, and the carrying out of other works since the Act of 1850 have been any improvement to the navigation, as compared with the former state of the river, 1653, 1654. 1664–1667. 1678–1687——Complains of the charge levied by the trustees upon barges passing through Bow lock, and submits that the navigation at this point should be free, as it was before the construction of the lock, 1655 *et seq.*

Meetings of Trustees. Information relative to the attendances at the meetings of the Trustees of the Lee, *Marchant* 484–490.

Metropolitan Board of Works. Approval of the representation of the Metropolitan Board of Works at the Board of Conservators as protecting the interests of the ratepayers and consumers, *Marchant* 606–608.

Decision by the Committee that one member of the Conservancy Board is to be elected by the Metropolitan Board of Works, *Ev.* 63.

Clause proposed on the part of the Metropolitan Board of Works, *Ev.* 119——Amended clause proposed by counsel for the promoters, *Ev.* 120——Adoption of the latter clause by the Committee, *ib.*

Mimram, The. Polluted condition at Welwyn, of the River Mimram, one of the tributaries of the Lee, *Tyler* 249, 250. 259——Very pure character of the Mimram stream, which is one of the tributaries of the Lee, above Hertford, *Trethewy* 1347–1355——Witness is the owner of all the property on the Mimram, from its junction with the Lee up to Pigswell, and testifies to the purity of the stream, *Lord Cowper* 1425–1430——Witness drinks the water himself, and finds it preferable to well water, *ib.* 1429, 1430.

Muir, James. (Analysis of his Evidence)—Is engineer to the New River Company, 2545——Believes that the Act of 1854 was in the first instance only intended for the diversion of the sewage of Hertford below the intake of the Company, 2546–2548——For the supply of Hertford, there is power to take a large quantity of water daily from the river, 2549.

N.

Navigation. Great benefit of the navigation to the adjoining lands and to the towns and villages through which it passes, *Marchant* 490–500——Great improvements effected by the trustees in deepening and straightening the bed of the river, and renewing and enlarging the locks, &c., *ib.* 502–509——Communication between the Board of Trade and the trustees relative to the provisions in the Bills affecting the navigation, *ib.* 550, 551——Doubt as to the traders on the river being dissatisfied with the administration of the navigation, *ib.* 703–707. 732–738——Improved state of the navigation further adverted to, *ib.* 711, 712.

Undue expenditure of late years by the trustees without any corresponding improvement in the state of the navigation, *Manser* 781–783——Good state of the navigation twenty years ago, *ib.* 783——Better state of the river and greater depth of water twenty years ago than at present, the trustees having since sold the water away, *Hunt* 854–856. 874——Witness

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Navigation—continued.

——Witness has frequently complained to the trustees on different matters, but without redress; on the last occasion of complaint was obliged to commence legal proceedings, in order to obtain satisfaction, *Wicks* 878–884.

Explanation of the improvements effected by the trustees since 1850, on the piece of the river from Bow Creek to Old Ford Lock, the result being a great benefit to the navigation, *Beardmore* 1512–1516. 1519–1540. 1562–1573.

Statement to the effect that the lower part of the river, was on the whole in as good a state for navigation before the Act of 1850, as since the construction of the locks by Mr. Beardmore, *Brown* 1598 *et seq.*——Denial that the construction of Bow Lock, and the carrying out of other works since the Act of 1850, have been any improvement to the navigation, as compared with the former state of the river, *Meeson* 1653, 1654. 1664–1667. 1678–1687.

See also *Bargeowners. Bow Lock. Conservancy Board. Dredging. Expenditure of Trustees.*

New River Company. Reason for the New River Company having a representative at the Board of Conservators, *Marchant* 596–603.

Decision of the Committee that two members of the Conservancy Board are to be elected by the New River Company, *Ev.* 63.

See also *Water Companies. Water Supply.*

Nitrates. Noxious effects of the nitrates which are in solution in sewage water; other sources from which any nitrates discovered in the Lee at Hertford may arise, *Taylor* 2382–2399. 2411, 2412. 2422–2426——Small quantity of nitrates in the Lee water examined by witness, *ib.* 2504–2506.

O.

Outlets (Sewage Discharge). The jurisdiction or powers of the Conservancy Board should generally apply to the outlets rather than to the drains themselves, *Rawlinson* 174.

P.

Page, Mr. The only trader now on the Board of Trustees is Mr. Page, the large malster at Ware, *Marchant* 690.

Parkes, Charles Henry. (Analysis of his Evidence).—Grounds for the conclusion that the proposed contribution of 1,500 *l.* a year by the East London and New River Companies for purification purposes under the Bill will barely suffice; entire inadequacy of a contribution of 500 *l.* a year, 2554 *et seq.*——Consideration of the payments already made by the two companies, amounting jointly to 3,500 *l.* a year, for the water taken from the Lee, as compared with the payments by the companies for supply from the Thames, 2557–2559. 2570–2591.

Statement in support of the view that there is not at present any binding obligation upon the River Lee trustees to maintain the purity of the river, though there is doubtless a moral obligation to do so, 2596–2603. 2679–2681——Numerous duties to be fulfilled by the new Board with reference to the exclusion of impurities from the river, so that a contribution of 1,500 *l.* a year on this score will be none too much, 2604. 2619 *et seq.*——Way in which the penalties enforced by the Board may be applied; small amount expected from this source, 2605–2618.

Opinion that the Bill will be of very great value to the companies, 2619——Arrangement that any surplus from the present income is to go towards a redemption of the bond debt, 2671–2674——Expected difficulty in regard to the Board obtaining a loan from Government, 2675–2677.

Penalties. Way in which the penalties enforced by the Conservancy Board may be applied; small amount expected from this source, *Parkes* 2605–2618.

Petitions. List of petitioners against the Bill, *Ev.* 1, 2.

Pollution of Rivers Commission. Witness was chairman of the Rivers Pollution Commission, and adheres to the recommendations made in the report of the Commission with reference to the River Lee, *Rawlinson* 2–4——Inquiry by the Rivers Commission into the Lee, immediately after the inquiry into the Thames, upon the ground that the former river was next in importance to the latter as regards the question of pollution, *ib.* 56–61.

Witness was a member of the Pollution of Rivers Commission, and fully concurs in the conclusions arrived at by the commission with reference to the Lee, *Way* 393–397——Recommendation by the Rivers Pollution Commission that all towns on the Lee above the

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Pollution of Rivers Commission—continued.

the intake of the water companies, should so treat their sewage as to remove all offensive matter, *Rawlinson* 901.

Preamble of the Bill. Decision that the preamble of the Bill is proved, *Rep.* v.

Public Loan. Expected difficulty in regard to the Conservancy Board obtaining a loan from Government, *Parkes* 2675–2677.

Special report by the Committee recommending that a public loan be advanced to the Lee Conservancy Board, so as to enable them to pay off the existing debenture debts of the trustees of the Lee and Stort Navigation, *Rep.* xiii.

Purification (*Generally*). Question as to the expense in the case respectively of large towns and of small villages, or communities, of preventing the pollution of rivers; optional modes of such prevention which may be adopted by villages, *Rawlinson* 74–81 ——Way in which it may be determined, without undue litigation, whether the effluent water passed into any stream or river is really free from injurious matter, and is up to a standard of purity, *ib.* 946–951——Expediency of the standard of purity for effluent water being settled by some scientific individual of eminence, *ib.* 1053.

Purification (*River Lee*). Extent to which the trustees have taken action to order to enforce the exclusion of impurities from the river, as interfering with the navigation, *Marchant* 664–671——Statement in support of the view that there is not at present any binding obligation upon the River Lee trustees to maintain the purity of the river, though there is doubtless moral obligation to do so, *Parkes* 2596–2603. 2679–2681.

Evidence as to the powerlessness of the trustees under their Act to enforce the exclusion of sewage, &c. from the river, *Marchant* 2682–2692. 2736–2771. 2823–2831—— Examination upon the subject of law suits undertaken by the trustees against the Metropolitan Board of Works and the Tottenham Local Board, an injunction having been obtained in each case against sewage discharged into the river, *ib.* 2741–2767. 2823–2831 ——Admission as to the trustees having been desirous of additional powers to prevent the discharge of sewage, though they did not contemplate being saddled with the additional expense, *ib.* 2768–2771.

Several points below the intake of the water companies, where it is necessary to enforce the exclusion of impurities; admission that the companies have no particular interest below the intake, *Marchant* 2772–2781——Evidence to the effect that the trust is not in a position to provide funds for the proper carrying out of the Bill as regards the purification of the river, *ib.* 2800–2822.

See also *Compulsory Purification.* *Irrigation.* *Lime Process.* *Sewage.* *Tributaries.* *Water Companies.* *Water Supply.*

R.

Ratepayers. Frequent obstinacy of ratepayers in the matter of sanitary improvements, so that enlarged powers are desirable in the proposed Conservancy Board for the Lee, *Rawlinson* 942–945. 952–960.

Rawlinson, Thomas. (Analysis of his Evidence.)—Is Chief Inspector of the Local Government Act Office, 1——Was Chairman of the Rivers Pollution Commission, and adheres to the recommendations made in the Report of the Commission with reference to the river Lee, 2–4——Supplies sundry reasons for the recommendation that the charge of the entire watershed of the Lee should be under the Conservancy Board, 7–12 ——Explains the course pursued by the Rivers Commission upon the question of placing the entire area of the Thames under the Thames Conservancy Board, 9.

Recommendation by the Commissioners in the case of the Aire and Calder that there should be but one jurisdiction, 9——Expediency of but one jurisdiction not only for the area or watershed of the Lee, but of every river in the kingdom, 9, 10——Impossibility of preventing pollution unless the Conservancy Board have entire control of the watershed, 11——Contemplated power in the Conservancy Board to facilitate works of drainage by landowners and others by the improvement of the area of the river, *ib.*

Small area of the Lee as compared with the Thames, whereas each river supplies a moiety of the population of London, 12–16——Outline of the extent and course of the Lee for the purposes of the proposed jurisdiction, 17–31——Imperfect character of the Conservancy unless the several tributaries of the river are placed under the control and jurisdiction of the Board, 32–41.

Belief that the Edmonton brook, Salmon brook, and the Moselle, do not run directly into the Lee, but into certain intercepting works of the East London Company near Tottenham Lock, 42–47——Importance of the intercepting works or catchwater dyke constructed by the East London Company, as well as the brooks which discharge into the dyke, being brought into the jurisdiction of the Conservancy, 48–52.

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Rawlinson, Thomas. (Analysis of his Evidence)—*continued.*

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Ware. Excessive pollution of the Lee at Ware, *Tyler* 231–238——Non-objection to the malting fluid at Ware going direct into the river if unmixed with sewage, *Rawlinson* 1022–1026. 1030. 1036——Concurrence of evidence as to the very impure state of the river at Ware, owing to the Hertford sewage, *Reason* 2072 *et seq.*; *Chuck* 2141 *et seq.*; *Collyer* 2205 *et seq.*; *Cobham* 2263, 2264. 2274–2278. 2292–2311——The river at Ware has been getting worse and worse since the Hertford sewage works have been in operation, *Chuck* 2168, 2169——Very small portion of the sewage of Ware which enters the river above witness's house, the nuisance arising almost exclusively from the Hertford sewage, *ib.* 2144–2149. 2161–2166. 2171–2173.

Case submitted by the Ware Local Board to counsel (Mr. Lush) in 1865, and opinion thereupon to the effect that the New River Company should be indicted if the nuisance from the Hertford sewage were not abated, *Cobham* 2275, 2276——Applications on the subject to the River Lee Trustees and the New River Company, but without effect, *ib.* 2276. 2279. 2288——Circumstance of no application having been made to the Board of Trade as suggested by Mr. Lush, *ib.* 2277–2289.

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Water Companies (Contribution). Fairness in the water companies being called upon to contribute towards the cost of intercepting drains, though they should not be bound to intercept the whole of the sewage of the entire watershed, *Rawlinson* 53–56.

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Water Companies (*Contribution*)—continued.

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Way, Professor John Thomas. (Analysis of his Evidence)—*continued.*

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Opinion that Luton should be prevented from discharging its sewage into the river on the present plan, 1876——Similar conclusion as regards Hertford, 1877——Difficulty in tracing the actual effect of the Luton sewage upon the river lower down, 1880–1898——Consideration of the favourable results shown by Professor Taylor from an analysis of four samples of water taken from Hertford, 1909–1912.

[Fourth Examination.]—Approval generally of the Hertford works for the particular purpose for which formed; they are, however, much less complete than the works at Leicester, 1913–1917. 1931–1936——Further examination in detail upon the question whether the sewage water from Hertford or Luton is really injurious to the water supply of the East London and New River Companies; conclusion on the whole that injury to health results, though the injurious substances or agents cannot be specifically traced and defined, 1918–1928. 1937. 2052–2069 *et seq.*

Consideration of the mischievous effects generally of the *fæces* and urine in town sewage, so that witness would, in fact, exclude all sewage matter from water used for drinking, 1951 *et seq.*——Advantage of the lime process as applied to sewage, rather than of discharging the sewage in its natural state, 1982–1986. 2030–2032——Further statement that the matters in solution, not operated upon by the lime process, are decidedly more injurious than the solid matters removed, 2007–2029.

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Welwyn. Difficulty of dealing with the sewage of Welwyn except by filtration, *Woakes* 1270.

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Admission that, as regards West Ham, the water companies and the water drinkers cannot be affected by the sewage or effluent water being discharged into the Lee some eleven miles below the point of intake, *Tyler* 352–357. 363. 372——Conclusion, however, that the West Ham sewage should enter the river as low down as possible, on account of the effect of an impure state of the river upon the inhabitants on the banks, *ib.* 362–383——Objection to any exclusion of West Ham from the jurisdiction of the new Conservancy Board, *ib.* 379–383.

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Several clauses proposed by counsel on the part of the West Ham Local Board of Health, it being stated that such clauses have been agreed to by the promoters, *Ev.* 94, 95.

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Report, 1868—*continued.*

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Wicks, Benjamin. (Analysis of his Evidence.)—Coal merchant and barge-owner at Edmonton: has known the Lee since 1814: 875, 876——Has long been of opinion that a portion of the conservators or trustees of the Lee should be chosen by election, 877——Has frequently complained to the trustees on different matters, but without redress; on the last occasion of complaint was obliged to commence legal proceedings in order to obtain satisfaction, 878–884.

Williams, Evan Owen. (Analysis of his Evidence.)—Is a builder and contractor at Luton, and is Chairman of the Local Board of Health, 1185, 1186——Submits that Luton having gone to a large expense for the purification of its sewage, and being a very poor town, should not be saddled with the additional expense of irrigation works, 1188. 1196. 1216. 1261——Supplies sundry details relative to the land in the neighbourhood of Luton, and contends that sufficient land cannot be obtained for sewage irrigation unless by paying a high price for it, and by lifting the sewage to a great height at heavy expense, 1189–1195. 1203–1256. 1261.

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TO THE

REPORT

FROM THE

SELECT COMMITTEE

ON THE

LEE RIVER CONSERVANCY BILL.

Ordered, by The House of Commons, *to be Printed,*
29 *May* 1868.

307—1.

Under 3 *oz.*

REPORT

FROM THE

SELECT COMMITTEE

ON

PUBLIC SCHOOLS BILL;

WITH THE

PROCEEDINGS OF THE COMMITTEE.

Ordered, by The House of Commons, *to be Printed,*
22 *May* 1868.

Friday, 20*th March* 1868.

Ordered, THAT the Public Schools Bill be committed to a Select Committee.

Thursday, 26*th March* 1868.

Ordered, THAT the Committee do consist of Nineteen Members.

Committee nominated of—

Mr. Ayrton.
Mr. Benyon.
Mr. Cavendish Bentinck.
Mr. Cardwell.
Mr. Clement.
Mr. Grant Duff.
Viscount Enfield.
Mr. Darby Griffith.
Mr. Neville-Grenville.
Mr. William Edward Forster.
Mr. Goschen.
Sir William Heathcote.
Mr. Howes.
Mr. Mowbray.
Mr. Neate.
Sir Stafford Northcote.
Mr. Powell.
Mr. Stone.
Mr. Walpole.

Ordered, THAT Five be the Quorum of the Committee.

Friday, 3*rd April* 1868.

Ordered, THAT the Copy of the Report of the Select Committee of the House of Lords on the Public Schools Bill, 1865, which, together with the Minutes of Evidence, was communicated to this House upon the 3rd day of July 1865, be referred to the Committee.

Ordered, THAT all Petitions presented to this House respecting the Public Schools Bill be referred to the Committee.

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REPORT.

THE SELECT COMMITTEE to whom the PUBLIC SCHOOLS BILL was referred have gone through the Bill and made Amendments thereunto.

22 *May* 1868.

PROCEEDINGS OF THE COMMITTEE.

Wednesday, 1*st April* 1868.

MEMBERS PRESENT:

Mr. Walpole.	Mr. Goschen.
Sir William Heathcote.	Viscount Enfield.
Mr. Mowbray.	Mr. Benyon.
Mr. Darby Griffith.	Mr. Ayrton.
Mr. Neate.	Mr. Grant Duff.
Mr. Stone.	Mr. Neville-Grenville.
Mr. Howes.	

Mr. WALPOLE was called to the Chair.

The Committee deliberated.

[Adjourned to Tuesday, 28th April, at Twelve o'clock.

Tuesday, 28*th April* 1868.

MEMBERS PRESENT:

Mr. CARDWELL in the Chair.

Mr. Bentinck.	Mr. Stone.
Colonel Neville-Grenville.	Mr. Ayrton.
Mr. Benyon.	Viscount Enfield.
Mr. Powell.	Mr. Howes.
Mr. Mowbray.	Mr. Neate.
Mr. Cardwell.	Mr. Forster.
Sir W. Heathcote.	Mr. Goschen.
Mr. Darby Griffith.	

The Preamble was postponed.

Clause 1, *agreed to.*

Clause 2, *agreed to.*

Clause 3.—Amendment proposed, in line 10, to insert the words "at St. Paul's, the governing body of the Mercers' Company"—(Mr. *Ayrton*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 7.	Noes, 9.
Mr. Bentinck.	Mr. Howes.
Mr. Grenville.	Mr. Benyon.
Mr. Stone.	Mr. Powell.
Mr. Ayrton.	Mr. Mowbray.
Viscount Enfield.	Mr. Cardwell.
Mr. Neate.	Sir W. Heathcote.
Mr. Grant Duff.	Mr. D. Griffith.
	Mr. Forster.
	Mr. Goschen.

Another

Another Amendment proposed, in line 10, to insert the words "at Merchant Taylors, the governing body of the Merchant Taylors' Company"—(Mr. *Ayrton*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 7.	Noes, 9.
Mr. Bentinck.	Mr. Howes.
Mr. Neville-Grenville.	Mr. Benyon.
Mr. Stone.	Mr. Powell.
Mr. Ayrton.	Mr. Mowbray.
Viscount Enfield.	Mr. Cardwell.
Mr. Neate.	Sir W. Heathcote.
Mr. Grant Duff.	Mr. D. Griffith.
	Mr. Forster.
	Mr. Goschen.

Clause *agreed to.*

Clause 4.—Amendment proposed, in line 32, after the words "Queen's scholars" to insert the words "and Bishop Williams's scholars"—(Mr. *Bentinck*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 5.	Noes, 9.
Mr. Bentinck.	Mr. Benyon.
Mr. Neville-Grenville.	Mr. Powell.
Mr. Ayrton.	Mr. Mowbray.
Viscount Enfield.	Mr. Cardwell.
Mr. Neate.	Sir W. Heathcote.
	Mr. Stone.
	Mr. Darby Griffith.
	Mr. Grant Duff.
	Mr. Goschen.

Clause *agreed to.*

Clause 5.—Amendment proposed, in line 1, before the word "Government," to insert the word "new"—(Mr. *Neate*).—Question, That the word "new" be there inserted—put, and *agreed to.*

Other Amendments made.

[Adjourned till Friday next, at Twelve o'clock.

Friday, 1*st May* 1868.

MEMBERS PRESENT:

Mr. WALPOLE in the Chair.

Mr. Howes.	Viscount Enfield.
Mr. Neville-Grenville.	Mr. Neate.
Mr. Benyon.	Mr. Forster.
Mr. Powell.	Mr. Bentinck.
Sir W. Heathcote.	Mr. Mowbray.
Mr. Stone.	Mr. Ayrton.
Mr. Darby Griffith.	Mr. Grant Duff.

Resolved, That the further consideration of Clause 5 be postponed till after Clause 7 shall have been considered.

Resolved, That the consideration of Clause 6 be postponed until after Clause 7 shall have been considered.

Clause 7.—Amendments made.—Another Amendment proposed, in line 27, to leave out the words "in the case of Eton and Winchester, to establish a governing body for the school, either wholly or partially distinct from the governing body of the college," in order to insert the words "such new governing body, in the case of Eton and Winchester, to be the governing body of the college and the school"—(Mr. *Neate*)—instead thereof.—Question, That the words proposed to be left out stand part of the clause—put, and *negatived*.—Question, That those words be there inserted—put, and *negatived*.

An Amendment made.

Another Amendment proposed, at the end of the Clause, to add the words "Provided that in every such governing body there shall be one representative for each of the two universities of Oxford and Cambridge, to be appointed in such way as the said universities shall respectively by statute direct"—(Mr. *Neate*).—Question proposed, That those words be there added:—Whereupon Amendment proposed to the proposed Amendment by leaving out the word "two" and by inserting the word "three" instead thereof—(Mr. *Ayrton*).—Question put, That the word "two" stand part of the proposed Amendment.—The Committee divided:

Ayes, 8.	Noes, 6.
Mr. Bentinck.	Mr. Stone.
Mr. Neville-Grenville.	Mr. Goschen.
Mr. Benyon.	Viscount Enfield.
Mr. Powell.	Mr. Neate.
Sir W. Heathcote.	Mr. Ayrton.
Mr. Mowbray.	Mr. Forster.
Mr. Darby Griffith.	
Mr. Grant Duff.	

Question, That those words be there added—put, and *negatived.*

Another Amendment made.—Further consideration of Clause *postponed.*

Clause 5 further considered:—Another Amendment proposed, in line 39, after the word "College," by inserting the words "or Hall"—(Mr. *Neate*).—Question, That those words be there inserted—put, and *agreed to.*

Another Amendment proposed, after "University," to insert "or otherwise by any member of such University"—(Mr. *Neate*).—Question, That those words be there inserted—put, and *agreed to.*

Another Amendment proposed, in line 40, to insert the words "or of the University of London"—(Mr. *Ayrton*).—Question, That those words be there inserted.—The Committee divided:

Ayes, 6.	Noes, 9.
Mr. Stone.	Mr. Howes.
Mr. Goschen.	Mr. Bentinck.
Viscount Enfield.	Mr. Neville-Grenville.
Mr. Neate.	Mr. Benyon.
Mr. Ayrton.	Mr. Powell.
Mr. Forster.	Sir W. Heathcote.
	Mr. Darby Griffith.
	Mr. Mowbray.
	Mr. Grant Duff.

[Adjourned till Tuesday next, at Twelve o'clock.

Tuesday, 5th May 1868.

MEMBERS PRESENT:

Mr. WALPOLE in the Chair.

Mr. Bentinck.	Mr. D. Griffith.
Mr. Benyon.	Mr. Mowbray.
Mr. Powell.	Viscount Enfield.
Mr. Forster.	Mr. Neville-Grenville.
Sir W. Heathcote.	Mr. Grant Duff.
Mr. Stone.	Mr. Goschen.
Mr. Ayrton.	Mr. Cardwell.
Mr. Neate.	

Clause 5 further considered, and an Amendment made.—Another Amendment proposed, in line 9, to insert the words "with respect to the Charterhouse, for the appropriation of such parts of the funds as may be reasonable for the establishment of branch day schools in those parts of the metropolis where such schools are most needed"—(Mr.

—(Mr. *Ayrton*).—Question put, That those words be there added.—The Committee divided:

Ayes, 5.	Noes, 9.
Mr. Forster.	Mr. Bentinck.
Mr. Ayrton.	Mr. Neville-Grenville.
Viscount Enfield.	Mr. Benyon.
Mr. Grant Duff.	Mr. Powell.
Mr. Neate.	Sir W. Heathcote.
	Mr. Stone.
	Mr. Darby Griffith.
	Mr. Mowbray.
	Mr. Cardwell.

Another Amendment made—Amendment proposed, to leave out Subsection 7, and to insert the words, " with respect to any office not hereinbefore mentioned, the salary of which is payable out of the property belonging to or held in trust for that school"—(Mr. *Ayrton*)—instead thereof:—Question, That Subsection 7 stand part of the Clause.—The Committee divided:

Ayes, 2.	Noes, 10.
Mr. Powell.	Mr. Bentinck.
Mr. Neate.	Mr. Neville-Grenville.
	Mr. Benyon.
	Sir William Heathcote.
	Mr. Forster.
	Mr. Stone.
	Mr. Ayrton.
	Viscount Enfield.
	Mr. Mowbray.
	Mr. Grant Duff.

Question, That those words be there inserted—put, and *agreed to.*

Question, That this Clause, as amended, stand part of the Bill—put, and *agreed to.*

Clause 6, amended, and *agreed to.*

Motion made, and Question, that the following words, " The governing bodies of the several schools to which this Act applies, shall consist of the persons mentioned in the several schedules annexed hereto respectively, and the provisions therein contained shall be of the same force as if they were enacted in the body of this Act"—(Mr. *Ayrton*)—be here inserted—put, and *negatived.*

Clause 7 further considered.—Question put, That this Clause, as amended, stand part of the Bill.—The Committee divided:

Ayes, 10.	Noes, 3.
Mr. Neville-Grenville.	Mr. Bentinck.
Mr. Benyon.	Mr. Ayrton.
Mr. Powell.	Viscount Enfield.
Sir W. Heathcote.	
Mr. Forster.	
Mr. Stone.	
Mr. Mowbray.	
Mr. Grant Duff.	
Mr. Neate.	
Mr. Howes.	

Clause 8,—Amendment made:—Another Amendment proposed, in line 13, after the word " shall," to insert the words " two months before the same is submitted to the Special Commissioners be transmitted to the parent or guardian of every boy in the school, and shall"—(Mr. *Darby Griffith*).—Question, That those words be there inserted—put, and *negatived.*

Another Amendment proposed, in line 30, after the word "conferred," to insert the words, " (1.) In every scheme adequate provision shall be made for the education in the school of the sons of the inhabitants of the place where such school may be situate, on their paying such sum for their education as may, in the opinion of the governing body, be reasonable, after making due allowance for the aid afforded by the endowment of the school, and without any favour or preference being given to scholars boarded by masters,

or by other persons licensed by them, or the governors of the school."—Question, That those words be there inserted.—The Committee divided:

Ayes, 2.	Noes, 11.
Mr. Ayrton.	Mr. Bentinck.
Mr. Neate.	Mr. Neville-Grenville.
	Mr. Benyon.
	Mr. Powell.
	Sir W. Heathcote.
	Mr. Forster.
	Mr. Stone.
	Mr. D. Griffith.
	Viscount Enfield.
	Mr. Goschen.
	Mr. Howes.

[Adjourned till Friday next, at One o'clock.

Friday, 8th May 1868.

MEMBERS PRESENT:

Mr. WALPOLE in the Chair.

Mr. Bentinck.	Mr. Stone.
Mr. Neville-Grenville.	Mr. Darby Griffith.
Sir S. Northcote.	Mr. Ayrton.
Mr. Benyon.	Viscount Enfield.
Mr. Powell.	Mr. Neate.
Sir W. Heathcote.	Mr. Mowbray.
Mr. Cardwell.	Mr. Grant Duff.
Mr. Forster.	

Clause 8 further considered.

Another Amendment proposed, in line 30, to insert the words, "With respect to Westminster, the school shall not be removed beyond the limits of the City of Westminster"—(Mr. *Ayrton*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 6.	Noes, 7.
Mr. Bentinck.	Mr. Neville-Grenville.
Mr. Forster.	Sir S. Northcote.
Mr. Stone.	Mr. Benyon.
Mr. Ayrton.	Mr. Powell.
Viscount Enfield.	Sir W. Heathcote.
Mr. Neate.	Mr. Cardwell.
	Mr. Darby Griffith.

Question, That this Clause, as amended, stand part of the Bill—put, and *agreed to.*

Clauses 9 to 30 postponed for the purpose of considering new Clause, A.—(Mr. *Ayrton*).—Clause brought up, and read the first time, as follows: "The new governing body of every school shall make a statute giving facilities for the education of boys not members of the Church of England without interfering with the religious convictions of their parents or guardians."—Question, That this clause be now read a second time.—The Committee divided:

Ayes, 3.	Noes, 10.
Mr. Forster.	Mr. Bentinck.
Mr. Stone.	Mr. Neville-Grenville.
Mr. Ayrton.	Sir S. Northcote.
	Mr. Benyon.
	Mr. Powell.
	Sir W. Heathcote.
	Mr. D. Griffith.
	Viscount Enfield.
	Mr. Neate.
	Mr. Mowbray.

Clauses 9, 10, and 11, *agreed to.*

Clause 12.—Amendment made.—Amendment proposed, in line 3, page 7, after the word "boys,"

"boys," to insert the words "either as day boys or boarders"—(Mr. *Neate*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 4.	Noes, 11.
Sir S. Northcote.	Mr. Bentinck.
Mr. Ayrton.	Mr. Neville-Grenville.
Viscount Enfield.	Mr. Benyon.
Mr. Neate.	Mr. Powell.
	Sir W. Heathcote.
	Mr. Cardwell.
	Mr. Forster.
	Mr. Stone.
	Mr. D. Griffith.
	Mr. Mowbray.
	Mr. Grant Duff.

Amendment proposed, in line 19, after the word "service," to leave out the words "and where the school has a chapel of its own, with respect to the chapel services and the appointment of preachers"—(Mr. *Stone*).—Question, That the words proposed to be left out stand part of the clause.—The Committee divided:

Ayes, 9.	Noes, 6.
Mr. Bentinck.	Mr. Benyon.
Mr. Neville-Grenville.	Mr. Powell.
Sir S. Northcote.	Sir W. Heathcote.
Mr. Darby Griffith.	Mr. Cardwell.
Mr. Ayrton.	Mr. Forster.
Viscount Enfield.	Mr. Stone.
Mr. Neate.	
Mr. Mowbray.	
Mr. Grant Duff.	

Amendment proposed, in line 25, after the word "therewith," to insert the words "and the arrangements and provisions to be made for sanitary purposes"—(Mr. *Neate*).—Question, That those words be there inserted,—put, and *negatived.*

Amendment proposed, in line 28, after the word "study," to leave out, the words "and with respect to the system"—(Mr. *Stone*).—Question put, That the words proposed to be left out stand part of the clause.—The Committee divided:

Ayes, 10.	Noes, 3.
Mr. Bentinck.	Mr. Powell.
Mr. Neville-Grenville.	Mr. Cardwell.
Sir S. Northcote.	Mr. Stone.
Mr. Benyon.	
Mr. Forster.	
Mr. Darby Griffith.	
Mr. Ayrton.	
Viscount Enfield.	
Mr. Neate.	
Mr. Mowbray.	

Another Amendment proposed, after the word "system," to insert, the words "and condition"—(Mr. *Neate*).—Question put, That those words be there inserted.—The Committee divided:

Aye, 1.	Noes, 12.
Mr. Neate.	Mr. Bentinck.
	Mr. Neville-Grenville.
	Sir S. Northcote.
	Mr. Benyon.
	Mr. Powell.
	Mr. Cardwell.
	Mr. Forster.
	Mr. Stone.
	Mr. D. Griffith.
	Mr. Ayrton.
	Viscount Enfield.
	Mr. Mowbray.

[Adjourned till Tuesday next, at Twelve o'clock.

Tuesday, 12th May 1868.

MEMBERS PRESENT:

Mr. WALPOLE in the Chair.

Sir Stafford Northcote.	Mr. D. Griffith.
Mr. Howes.	Mr. Ayrton.
Mr. Bentinck.	Viscount Enfield.
Mr. Neville-Grenville.	Mr. Neate.
Mr. Powell.	Mr. Mowbray.
Sir W. Heathcote.	Mr. Grant Duff.
Mr. Forster.	Mr. Stone.

Clause 12 further considered.—Amendment proposed, in Sub-section 8, line 30, after the word "number" to insert the words "position and rank in the school and salaries and emoluments"—(Mr. *Ayrton*).—Question, That those words be there inserted—put, and *agreed to.*

Another Amendment proposed, after the word "Emoluments," to insert the words, "mode of appointment and power and conditions"—(Mr. *Neate*).—Question, That those words be there inserted—put, and *negatived.*

Amendment made by striking out Sub-section 9.

Another Amendment proposed, in line 35, to insert the words: "With respect to giving facilities for the education of boys whose parents or guardians wish to withdraw them from the religious instruction given in the school"—(Mr. *Forster*).—Question, That those words be there inserted—put, and *agreed to.*

Another Amendment made.

Another Amendment proposed, to insert the words "the power to make regulations with respect to the chapel, services, and the appointment of preachers shall apply only to the schools of Eton and Winchester"—(Mr. *Powell*).—Question, That those words be there inserted—put, and *negatived.*

Amendment proposed to insert, as Sub-section 10, the words "with respect to giving facilities for boys other than boarders to attend at the school and participate in the educational advantages thereof"—(Viscount *Enfield*).—Question, That those words be there inserted—put, and *agreed to.*

Question, That Clause 12, as amended, stand part of the Bill—put, and *agreed to.*

Clause 13:—Amendment proposed, in line 43, to leave out the words "except Shrewsbury School"—(Mr. *Forster.*)—Question put, That the words "except Shrewsbury School" stand part of the Clause.—The Committee divided:

Ayes, 5.	Noes, 9.
Mr. Neville-Grenville.	Mr. Bentinck.
Mr. Howes.	Sir S. Northcote.
Mr. Powell.	Mr. Mowbray.
Sir Wm. Heathcote.	Mr. Stone.
Mr. Neate.	Mr. Forster.
	Mr. D. Griffith.
	Mr. Ayrton.
	Viscount Enfield.
	Mr. Grant Duff.

Another Amendment, in line 1, page 7, after the word "masters," to insert the words, "or for such term of years as such new governing body shall think fit"—(Mr. *Neate*).—Question, That those words be there inserted—put, and *negatived.*

Another Amendment proposed, in line 2, page 8, to leave out the words, "and hold their offices at the pleasure of"—(Mr. *Neate*).—Question, That the words proposed to be left out stand part of the Clause—put, and *agreed to.*

Another Amendment proposed, to leave out from the word "master," to the end of the Clause—(Mr. *Forster*).—Question put, That the word "provided" stand part of the Clause.—The Committee divided:

Ayes, 6.	Noes, 7.
Mr. Howes.	Mr. Powell.
Mr. Bentinck.	Sir W. Heathcote.
Mr. Neville-Grenville.	Mr. Forster.
Sir S. Northcote.	Mr. Stone.
Mr. Mowbray.	Mr. Ayrton.
Mr. D. Griffith.	Viscount Enfield.
	Mr. Grant Duff.

Remaining words of the Clause, *disagreed to.*

Another

Another Amendment proposed, after the word "master," to add the words, "No head master shall be dismissed except with the concurrence of a majority of the whole number of the governing body"—(Mr. *Powell*).—Question, That those words be there added.—The Committee divided:

Ayes, 3.	Noes, 9.
Mr. Powell.	Mr. Howes.
Sir Wm. Heathcote.	Mr. Bentinck.
Viscount Enfield.	Mr. Neville-Grenville.
	Mr. Mowbray.
	Mr. Forster.
	Mr. Stone.
	Mr. D. Griffith.
	Mr. Ayrton.
	Mr. Grant Duff.

Question, That Clause 13, as amended, stand part of the Bill—put, and *agreed to.*

Clause 14:—Amendment proposed, in line 19, to leave out the words "of Harrow and Rugby Schools," in order to insert the words "each school to which this Act applies"—(Mr. *Ayrton*)—instead thereof.—Question, That the words proposed to be left out stand part of the Clause—put, and *agreed to.*

Another Amendment proposed, in page 8, line 32, to leave out the words "separate school, either in connection or not in connection with the existing school," in order to insert the words, "a lower school in connection with the existing school"—(Viscount *Enfield*)—instead thereof.—Question put, That the word "separate" stand part of the Clause.—The Committee divided:

Ayes, 9.	Noes, 2.
Mr. Howes.	Mr. Ayrton.
Mr. Bentinck.	Viscount Enfield.
Mr. Neville-Grenville.	
Mr. Powell.	
Mr. Mowbray.	
Sir William Heathcote.	
Mr. Stone.	
Mr. Forster.	
Mr. Grant Duff.	

Another Amendment proposed, in page 9, line 2, to leave out the words "at the time of the passing of this Act"—(Mr. *Ayrton*).—Question, That the words proposed to be left out stand part of the Clause.—The Committee divided:

Ayes, 7.	Noes, 2.
Mr. Bentinck.	Mr. Ayrton.
Mr. Neville-Grenville.	Viscount Enfield.
Mr. Powell.	
Sir William Heathcote.	
Mr. Stone.	
Mr. Forster.	
Mr. Grant Duff.	

Question, That this Clause, as amended, stand part of the Bill—put, and *agreed to.*

Clause 15, *postponed.*

Clauses 16, 17, 18, *agreed to.*

Clause 19, amended, and *postponed.*

[Adjourned till Tuesday next, at Twelve o'clock.

Tuesday, 19*th May* 1868.

MEMBERS PRESENT:

Sir S. Northcote.	Mr. Forster.
Mr. Clement.	Mr. Neville-Grenville.
Mr. Bentinck.	Mr. Neate.
Mr. Benyon.	Mr. Ayrton.
Mr. Powell.	Mr. Goschen.
Mr. Mowbray.	Mr. Cardwell.
Sir Wm. Heathcote.	Mr. Grant Duff.
Mr. Stone.	Mr. Howes.

In the absence of Mr. *Walpole*, Sir *Stafford Northcote* took the Chair.

Clause 19, amended, and *agreed to.*

Clause 20:—Amendment proposed, in line 8, to fill up the blank with the words "not exceeding five thousand pounds"—(Mr. *Bentinck*).—Question, That the blank be filled up with the words "not exceeding five thousand pounds,"—put, and *negatived.*

Another Amendment proposed, to fill up the blank with the words "three thousand five hundred pounds"—(Mr. *Mowbray*).—Question put, That the blank be filled up with the words "three thousand five hundred pounds."—The Committee divided:

Ayes, 14.	Noe, 1.
Mr. Clement.	Mr. Ayrton.
Mr. Bentinck.	
Mr. Benyon.	
Mr. Powell.	
Mr. Mowbray.	
Sir Wm. Heathcote.	
Mr. Forster.	
Mr. Stone.	
Mr. Goschen.	
Mr. D. Griffith.	
Mr. Neate.	
Mr. Neville-Grenville.	
Mr. Cardwell.	
Mr. Howes.	
Mr. Grant Duff.	

Amendment made.

Amendment proposed, to leave out from the word "the," in line 17, to the word "mentioned," in line 25—(Mr. *Ayrton*).—Question, That the words proposed to be left out stand part of the Clause—put, and *agreed to.*

Another Amendment proposed, in line 31, after the word "body," to insert the words "It shall be lawful for the Ecclesiastical Commissioners at any time hereafter, on the application of the new governing body of Westminster School, to assign to such governing body, by way of capital sum or annual payment, such further moneys as the said governing body may appear to the said Commissioners to require for meeting any additional expenses to be incurred by reason of the increase of scholars or otherwise, with a view of promoting the efficiency of the said school.

"The Commissioners may also convey to the said governing body for the use of the said school any houses, sites of houses, or other premises adjoining or connected with the school, as may appear to the said Commissioners desirable, for the accommodation or well-being of the boys of the said school"—(Mr. *Bentinck*).—Question put, That those words be there inserted.—The Committee divided:

Aye, 1.	Noes, 10.
Mr. Bentinck.	Mr. Benyon.
	Mr. Powell.
	Mr. Mowbray.
	Sir Wm. Heathcote.
	Mr. Stone.
	Mr. Ayrton.
	Mr. Darby Griffith.
	Mr. Neville-Grenville.
	Mr. Cardwell.
	Mr. Howes.

Amendments made.

Another Amendment proposed, to add the words: "Provided always, in the event of Westminster School being removed beyond the City of Westminster, all the property

perty and income derived by the said School from the Ecclesiastical Commissioners, or the Dean and Chapter of Westminster, or their estates, shall revert to and become vested in the Ecclesiastical Commissioners"—(Mr. *Ayrton*).—Question put, That those words be there added:—The Committee divided:

Ayes, 7.	Noes, 6.
Mr. Powell.	Mr. Bentinck.
Mr. Forster.	Mr. Benyon.
Mr. Stone.	Mr. Mowbray.
Mr. Ayrton.	Sir W. Heathcote.
Mr. Neate.	Mr. D. Griffith.
Mr. Neville-Grenville.	Mr. Howes.
Mr. Cardwell.	

Question, That this Clause, as amended, stand part of the Bill—put, and *agreed to.*

Clause 21:—Amendment proposed, in line 8, after the word "Schools," to insert the words, "or for building or adding to tutors' houses or boarding houses, or for buying up the leases or freeholds of the same"—(Mr. *Neville-Grenville*).—Question, That those words be there inserted—put, and *negatived.*

Another Amendment proposed, in line 17, after the word "body," to insert the words "Provided always, that there shall be paid to the governing body for the use of any boarding-house belonging to them, a sufficient rent for the same"—(Mr. *Ayrton*).—Question put, That those words be there inserted.—The Committee divided:

Ayes, 4.	Noes, 6.
Sir W. Heathcote.	Mr. Bentinck.
Mr. Stone.	Mr. Benyon.
Mr. Ayrton.	Mr. Powell.
Mr. Cardwell.	Mr. D. Griffith.
	Mr. Neville-Grenville.
	Mr. Howes.

Clause *agreed to.*

Clause 22:—Question put, That this Clause stand part of the Bill.—The Committee divided:

Ayes, 5.	Noes, 5.
Mr. Bentinck.	Mr. Powell.
Mr. Benyon.	Sir Wm. Heathcote.
Mr. Ayrton.	Mr. Stone.
Mr. Cardwell.	Mr. D. Griffith.
Mr. Howes.	Mr. Neville-Grenville.

Whereupon the Chairman declared himself with the Ayes.

Clause 23:—Amendment made.—Amendment proposed, in line 39, to leave out the words, "in the gift of the Provost and Fellows of Eton"—(Mr. *Ayrton*).—Question, That the words proposed to be left out stand part of the Clause—put, and *agreed to.*

Clause, as amended, *agreed to.*

Clause 25, amended, and *agreed to.*

Clause 26 *agreed to.*

Clause 27:—Amendments made.—Question, That this Clause, as amended, stand part of the Bill—put, and *negatived.*

Clause 28 *postponed.*

Clause 29:—Amendment proposed, at the end of the Clause, to add the words "except that the said Governors shall hereafter bear the corporate name of the Governors of Sutton's Hospital in Charterhouse, in place of the above-mentioned name"—(Mr. *Benyon*).—Question put, That those words be there added.—The Committee divided:

Ayes, 10.	Noe, 1.
Mr. Benyon.	Mr. Ayrton.
Mr. Powell.	
Sir W. Heathcote.	
Mr. Forster.	
Mr. Stone.	
Mr. Goschen.	
Mr. Neville-Grenville.	
Mr. Cardwell.	
Mr. Howes.	
Mr. Grant Duff.	

Clause, as amended, *agreed to.*

Clause 30 *disagreed to.*

[Adjourned till Friday next, at One o'clock.

Friday, 22nd May 1868.

MEMBERS PRESENT:

Sir S. NORTHCOTE in the Chair.

Mr. Grant Duff.	Mr. D. Griffith.
Mr. Benyon.	Mr. Cardwell.
Mr. Powell.	Mr. Ayrton.
Mr. Mowbray.	Mr. Neate.
Sir W. Heathcote.	Mr. Stone.
Mr. Forster.	Mr. Bentinck.
Lord Enfield.	Mr. Goschen.

Postponed Clause 15.—Amendment proposed, to leave out the words, "the Most Reverend Father in God William Lord Archbishop of York,

Sir John Lubbock, Baronet, the Right Honourable Russell Gurney, Recorder of the City of London, Sir John George Shaw Lefevre, Knight Commander of the Bath, John Duke Coleridge, Esquire, one of Her Majesty's Counsel, the Reverend Joseph Williams Blakesley, Bachelor in Divinity, one of the Canons Residentiary of Canterbury"—(Mr. *Neate*).—Question put, That the word "the" stand part of the Clause.—The Committee divided:

Ayes, 10.	Noes, 3.
Mr. Grant Duff.	Mr. Darby Griffith.
Mr. Neville-Grenville.	Mr. Ayrton.
Mr. Benyon.	Mr. Neate.
Mr. Powell.	
Mr. Mowbray.	
Sir W. Heathcote.	
Mr. Forster.	
Mr. Cardwell.	
Mr. Goschen.	
Lord Enfield.	

Amendment proposed, That the name of "The Most Noble Robert Arthur Talbot Gascoyne Cecil, Marquis of Salisbury," be inserted in the Clause—(Sir *Stafford Northcote*).—Question, That those words be there inserted—put, and *agreed to.*

Another Amendment proposed, to leave out the name of "Sir John Lubbock"—(Mr. *Neate*).—Question, That the name of "Sir John Lubbock" stand part of the Clause—put and *agreed to.*

Another Amendment proposed, to leave out the name of "Mr. Russell Gurney"—(Mr. *Neate*).—Question, That the name of "Mr. Russell Gurney" stand part of the Clause—put, and *agreed to.*

Another Amendment proposed, to leave out the name of "John Duke Coleridge, Esq."—(Mr. *Neate*).—Question, That the name of "John Duke Coleridge," Esq. stand part of the Clause—put, and *agreed to.*

Another Amendment proposed, to insert the name of "Dr. Charles Stewart Parker"—(Viscount *Enfield*).—Question, That the name of "Dr. Charles Stewart Parker" be there inserted—put, and *agreed to.*

Another Amendment made.—Clause, as amended, *agreed to.*

Postponed Clause 28, *agreed to.*

New Clause (Saving Clause as to interested parties) — brought up, and read the first time, as follows:—

"Nothing contained in this Act, or done in pursuance of the powers thereby conferred, shall, as respects any schools to which this applies, affect,—

"(1.) Any boy being at the time of the passing of this Act on the foundation of any of the said schools, so far as respects his interest in such foundation during his continuance at school:

"(2.) The tenure by any person of any scholarship exhibition or other like emolument held by him at the time of the passing of this Act, and not forming part of the interest of a boy on the foundation hereinbefore mentioned:

"(3.) The

"(3.) The vested interests of any master in any of the said schools appointed to his office before the passing of the Public Schools Act, 1864, unless a due equivalent be made in respect thereof:

"(4.) The pecuniary interest belonging to or capable of being enjoyed by any member of the governing bodies of the said schools who may have been appointed to his office before the passing of the said Public Schools Act, 1864, unless a due equivalent be made in respect thereof:

"(5.) The status as a member of any person who may have been appointed a member of the collegiate bodies of Eton or Winchester before the passing of the said Public Schools Act of 1864.

"And nothing contained in this Act or done in pursuance of the powers thereof shall affect the Dean and Chapter of Westminster or any member of that body, except in so far as relates to their status as the governing body of Westminster School, or is hereinbefore expressly provided with respect to the property to be appropriated to or for the use of the said school."

Clause read a second time, and *added.*

New Clause brought up, and read the first time, as follows:—

"The chapel of every school to whcih this Act applies shall be deemed to be a chapel dedicated and allowed by the ecclesiastical law of this realm for the performance of public worship and the administration of the sacraments according to the Liturgy of the Church of England, and to be free from the jurisdiction or control of the incumbent of the parish in which such chapel is situate.

"Any scheme which may be made in pursuance of this Act constituting the parish of Eton a separate vicarage shall contain provisions making the existing chapel of ease at Eton the parish church of Eton, and exempting the college chapel from being dealt with as a parish church."—Read a second time, and *added.*

New Clause brought up, and read the first time, as follows:—

"Subject to the conditions in this Act contained with respect to the forfeiture of property, the governing body for the time of Westminster School may lay a scheme before Her Majesty in Council for the removal of the school to some other site; and any such scheme shall be subject to the same provisions, and, if approved, shall take effect, and be subject to alterations in the same manner as statutes made by a governing body:

"Provided, firstly, that any scheme made under this section before the expiration of the powers by this Act conferred on the special commissioners shall be approved of by them before being laid before Her Majesty in Council; secondly, that the power of making a scheme under this section shall not pass to the special commissioners, or cease after the expiration of the powers of the special commissioners, but shall continue vested in the governing body for the time being of the said school."—Read a second time, and *added.*

New Clause brought up, and read the first time, as follows:—

"Nothing in this Act contained or done in pursuance thereof shall affect the rights of the burgesses of Shrewsbury at the time of the passing of this Act to send their children to Shrewsbury School"—(Mr. *Powell*).—Clause read a second time, and *added.*

New Clause brought up, and read the first time, as follows:—

"Provided always, that in the Statutes to be made under this Act, for every school to which this Act applies there shall be contained the following provisions:—

"When any boy shall be residing, within three miles of the school, with a parent or relation within the fourth degree of relationship by consanguinity or affinity, or with his guardian; then for the education of such boy as a day scholar.

"When any boy whose parent or guardian shall desire to withdraw him from the religious instruction given in the school, or the religious service of the chapel of the school, on the ground of his belonging to any particular denomination of religion, and there is some person of the same denomination, approved by the governing body of the school, receiving boarders within three miles of the school, shall be placed by such parent or guardian with such person; then for the education of such boy as a day scholar"—(Mr. *Ayrton*)—Question put, That this Clause be now read a second time.—The Committee divided:

Ayes, 4.	Noes, 6.
Mr. Stone.	Mr. Neville-Grenville.
Mr. Ayrton.	Mr. Benyon.
Lord Enfield.	Mr. Powell.
Mr. Neate.	Sir W. Heathcote.
	Mr. Darby Griffith.
	Mr. Bentinck.

Preamble *agreed to.*

Ordered, To Report the Bill, with the Amendments, to the House.

REPORT

FROM THE

SELECT COMMITTEE

ON

PUBLIC SCHOOLS BILL;

WITH THE

PROCEEDINGS OF THE COMMITTEE,

Ordered, by The House of Commons, *to be Printed,*
22 *May* 1868.

292. *Under* 2 *oz.*